

(a) Civil Air Patrol land and mobile stations may communicate with other land and, mobile stations of the Civil Air Patrol. A Civil Air Patrol land station may be moved from its authorized location for temporary operation in the same general area for short periods of time not to exceed 72 hours.

(b) When engaged in training or on actual missions in support of the U.S. Air Force, Civil Air Patrol stations may communicate with U.S. Air Force stations on the frequencies specified in subpart E.

§87.503 Supplemental eligibility.

Licenses for Civil Air Patrol land and mobile stations will be issued only to Wings or the Headquarters of the Civil Air Patrol. All applications must be submitted to the Commission via Civil Air Patrol Headquarters, Maxwell Air Force Base, AL 36112. A single fleet license will be issued to Civil Air Patrol Headquarters and to each Civil Air Patrol Wing to authorize all Civil Air Patrol Station transmitters operated by the Wing or Headquarters.

[54 FR 11721, Mar. 22, 1989]

§87.505 Frequencies.

The assigned frequencies available for assignment to Civil Air Patrol land and mobile stations are contained in the frequency table in subpart E. The frequency, emission, and maximum power will be determined by Headquarters Civil Air Patrol in accordance with the Civil Air Patrol Communications Plan.

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§87.525 Scope of service.

Automatic weather observation stations must provide up-to-date weather information including the time of the latest weather sequence, altimeter setting, wind speed and direction, dew-point, temperature, visibility and other pertinent data needed at airports having neither a full-time control tower nor a full-time FAA Flight Service Station. When a licensee has entered into an agreement with the FAA, an automatic weather observation station may also operate as an automatic ter-

minal information station during the control tower's operating hours.

§87.527 Supplemental eligibility.

(a) Licenses will be granted only upon FAA approval.

(b) Eligibility for an automatic weather observation station or an automatic terminal information station is limited to the owner or operator of an airport or to a person who has entered into a written agreement with the owner or operator for exclusive rights to operate and maintain the station. Where applicable a copy of the agreement between the applicant and owner or operator of the airport must be submitted with an application.

(c) Only one automatic weather observation station or an automatic terminal information station will be licensed at an airport.

§87.529 Frequencies.

Prior to submitting an application, each applicant must notify the nearest appropriate FAA Regional Spectrum Management Office. Each application must be accompanied by a statement showing the name of the FAA Regional Office and date notified. The Commission will assign the frequency. Normally frequencies available for air traffic control operations set forth in subpart E will be assigned to automatic weather observation stations and to automatic terminal information stations. When a licensee has entered into an agreement with the FAA to operate the same station as both an automatic weather observation station and as an automatic terminal information station, the same frequency will be used in both modes of operation.

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AUTHORITY: Secs. 4, 251–2, 303, 309, and 332, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 251–2, 303, 309 and 332, unless otherwise noted.

SOURCE: 43 FR 54791, Nov. 22, 1978, unless otherwise noted.

EDITORIAL NOTE: At 62 FR 18924–18936, Apr. 17, 1997, part 90 was amended, effective Oct. 17, 1997. The text of removed section 90.277 and the superseded text of the amended sections remaining in effect until Oct. 17, 1997, appear in the Oct. 1, 1996 revision of title 47, part 80 to end.

Subpart A—General Information

§ 90.1 Basis and purpose.

(a) *Basis.* The rules in this part are promulgated under Title III of the Communications Act of 1934, as amended which vests authority in the Federal Communications Commission to regulate radio transmission and to issue licenses for radio stations. All rules in this part are in accordance with applicable treaties and agreements to which the United States is a party.

(b) *Purpose.* This part states the conditions under which radio communications systems may be licensed and used in the Public Safety, Special Emergency, Industrial, Land Transportation, and Radiolocation Radio Serv-

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ices. These rules do not govern radio systems employed by agencies of the Federal Government.

§ 90.5 Other applicable rule parts.

Other Commission rule parts of importance that may be referred to with respect to licensing and operations in radio services governed under this part include the following:

(a) Part 0 of the Commission's Rules describes the Commission's organization and delegations of authority. This part also lists available Commission publications, and standards and procedures for access to Commission records, and location of Commission Field Offices.

(b) Part 1 of this chapter includes rules of practice and procedure for application signature requirements, adjudicatory proceedings including hearing proceedings, and rule making proceedings; procedures for reconsideration and review of the Commission's actions; provisions concerning violation notices and forfeiture proceedings; and the environmental processing requirements that, if applicable, must be complied with prior to initiating construction.

(c) Part 2 contains the table of frequency allocations and special requirements in International regulations, agreements, and treaties. This part also contains standards and procedures concerning marketing of radio frequency devices, and for obtaining equipment type acceptance and type approval.

(d) Part 5 contains standards and procedures for obtaining experimental authorizations.

(e) Part 15 provides for the operation of incidental and restricted radio frequency devices that do not require an individual license.

(f) Part 17 contains detailed requirements for construction, marking, and lighting of antenna towers.

(g) Part 18 deals with the operation of industrial, scientific, and medical (ISM) devices that are not intended for radio communication.

(h) Part 20 of this chapter contains rules relating to commercial mobile radio services.

(i) Part 20 of this chapter which governs commercial mobile radio service

applicable to certain providers in the following services in this part:

- (1) Business radio service;
- (2) Private paging;
- (3) Land mobile service on 220–222 MHz;
- (4) Specialized Mobile Radio Service.
- (j) Part 22 contains regulations for public (common carrier) mobile radio services.
- (k) Part 51 contains rules relating to interconnection.
- (l) Part 68 contains technical standards for connection of private land mobile radio equipment to the public switched telephone network.
- (m) Part 94 governs licensing and operation of private operational-fixed radio stations on frequencies in the microwave spectrum above 928 MHz.

[43 FR 54791, Nov. 22, 1978, as amended at 50 FR 39677, Sept. 30, 1985; 55 FR 20398, May 16, 1990; 58 FR 21407, Apr. 21, 1993; 59 FR 18499, Apr. 19, 1994; 59 FR 59957, Nov. 21, 1994; 61 FR 45635, Aug. 29, 1996]

§ 90.7 Definitions.

Antenna height above average terrain (AAT). Height of the center of the radiating element of the antenna above the average terrain. (See § 90.309(a)(4) for calculation method.)

Antenna height above sea level. The height of the topmost point of the antenna above mean sea level.

Antenna structure. Structure on which an antenna is mounted.

Assigned frequency. Center of a frequency band assigned to a station.

Assigned frequency band. The frequency band the center of which coincides with the frequency assigned to the station and the width of which equals the necessary bandwidth plus twice the absolute value of the frequency tolerance.

Authorized bandwidth. The frequency band, specified in kilohertz and centered on the carrier frequency containing those frequencies upon which a total of 99 percent of the radiated power appears, extended to include any discrete frequency upon which the power is at least 0.25 percent of the total radiated power.

Automobile emergency licensee. Persons regularly engaged in any of the following activities who operate radio stations for transmission of communica-

tions required for dispatching repair trucks, tow trucks, or other road service vehicles to disabled vehicles:

- (1) The operation of a private emergency road service for disabled vehicles by associations of owners of private automobiles; or
- (2) The business of providing to the general public an emergency road service for disabled vehicles.

Average terrain. The average elevation of terrain between 3.2 and 16 km (2 and 10 miles) from the antenna site.

Base station. A station at a specified site authorized to communicate with mobile stations.

Basic trading areas. Service areas that are based on the Rand McNally 1992 *Commercial Atlas & Marketing Guide*, 123rd Edition, at pages 38–39, with the following additions licensed separately as BTA-like areas: American Samoa; Guam, Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The Mayaguez/Aguadilla-Ponce BTA-like service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincon, Sabana Grande, Salinas, San German, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like service area consists of all other municipios in Puerto Rico.

Carrier frequency. The frequency of an unmodulated electromagnetic wave.

Channel loading. The number of mobile transmitters authorized to operate on a particular channel within the same service area.

Control point. Any place from which a transmitter's functions may be controlled.

Control station. An Operational Fixed Station, the transmissions of which are used to control automatically the emissions or operation of another radio station at a specified location.

Conventional radio system. A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunked group. An “urban-conventional system” is one whose

transmitter site is located within 24 km (15 miles) of the geographic center of any of the first 50 urbanized areas (ranked by population) of the United States. A “sub-urban-conventional system” is one whose transmitter site is located more than 24 km (15 miles) from the geographic center of the first 50 urbanized areas. See Table 21, Rank of Urbanized Areas in the United States by Population, page 1-87, U.S. Census (1970); and table 1 of §90.635.

Developmental operation. A specially licensed operation for the purpose of testing concepts in the use of radio appropriate to the radio services governed by this part.

Dispatch point. Any place from which radio messages can be originated under the supervision of a control point.

EA-based or EA license. A license authorizing the right to use a specified block of SMR and 220–222 MHz spectrum within one of 175 Economic Areas (EAs) as defined by the Department of Commerce Bureau of Economic Analysis. The EA Listings and the EA Map are available for public inspection at the Wireless Telecommunications Bureau’s public reference room, Room 5608, 2025 M St. NW., Washington, DC 20554 and Office of Operations—Gettysburg, 1270 Fairfield Road, Gettysburg, PA 17325.

Economic Areas (EAs). A total of 175 licensing regions based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas defined as of February 1995, with the following exceptions:

(1) Guam and Northern Mariana Islands are licensed as a single EA-like area (identified as *EA 173* in the 220 MHz Service);

(2) Puerto Rico and the U.S. Virgin Islands are licensed as a single EA-like area (identified as *EA 174* in the 220 MHz Service); and

(3) American Samoa is licensed as a single EA-like area (identified as *EA 175* in the 220 MHz Service).

Effective radiated power (ERP). The power supplied to an antenna multiplied by the relative gain of the antenna in a given direction.

Emergency medical licensee. Persons or entities engaged in the provision of basic or advanced life support services on an ongoing basis that operate radio

stations for transmission of communications essential for the delivery or rendition of emergency medical services for the provision of basic or advanced life support.

Film and video production licensee. Persons primarily engaged in or providing direct technical support to the production, videotaping, or filming of motion pictures or television programs, such as movies, programs, news programs, special events, educational programs, or training films, regardless of whether the productions are prepared primarily for final exhibition at theatrical outlets or on television or for distribution through other mass communications outlets.

Fire licensee. Any territory, possession, state, city, county, town, or similar governmental entity, and persons or organizations charged with specific fire protection activities that operate radio stations for transmission of communications essential to official fire activities.

Fixed relay station. A station at a specified site used to communicate with another station at another specified site.

Forest products licensee. Persons primarily engaged in tree logging, tree farming, or related woods operations, including related hauling activities, if the hauling activities are performed under contract to, and exclusively for, persons engaged in woods operations or engaged in manufacturing lumber, plywood, hardboard, or pulp and paper products from wood fiber.

Forward links. Transmissions in the frequency bands specified in §90.357(a) and used to control and interrogate the mobile units to be located by multilateration LMS systems.

Frequency coordination. The process of obtaining the recommendation of a frequency coordinator for a frequency(ies) that will most effectively meet the applicant’s needs while minimizing interference to licensees already operating within a given frequency band.

Frequency coordinator. An entity or organization that has been certified by the Commission to recommend frequencies for use by licensees in the Private Land Mobile Radio Services.

Geographic center. The geographic center of an urbanized area is defined

by the coordinates given at table 1 of § 90.635.

Geophysical telemetry. Telemetry involving the simultaneous transmission of seismic data from numerous locations to a central receiver and digital recording unit.

Harmful interference. For the purposes of resolving conflicts between stations operating under this part, any emission, radiation, or induction which specifically degrades, obstructs, or interrupts the service provided by such stations.

Interconnection. Connection through automatic or manual means of private land mobile radio stations with the facilities of the public switched telephone network to permit the transmission of messages or signals between points in the wireline or radio network of a public telephone company and persons served by private land mobile radio stations. Wireline or radio circuits or links furnished by common carriers, which are used by licensees or other authorized persons for transmitter control (including dial-up transmitter control circuits) or as an integral part of an authorized, private, internal system of communication or as an integral part of dispatch point circuits in a private land mobile radio station are not considered to be interconnection for purposes of this rule part.

Internal system. An internal system of communication is one in which all messages are transmitted between the fixed operating positions located on premises controlled by the licensee and the associated mobile stations or paging receivers of the licensee. (See subpart O).

Itinerant operation. Operation of a radio station at unspecified locations for varying periods of time.

Land mobile radio service. A mobile service between base stations and land mobile stations, or between land mobile stations.

Land mobile radio system. A regularly interacting group of base, mobile and associated control and fixed relay stations intended to provide land mobile radio communications service over a single area of operation.

Land station. A station in the mobile service not intended to be used while in motion. [As used in this part, the term

may be used to describe a base, control, fixed, operational fixed or fixed relay station, or any such station authorized to operate in the "temporary" mode.]

Line A. An imaginary line within the U.S., approximately paralleling the U.S.-Canadian border, north of which Commission coordination with Canadian authorities in the assignment of frequencies is generally required. It begins at Aberdeen, Washington, running by great circle arc to the intersection of 48° N., 120° W., then along parallel 48° N., to the intersection of 95° W., thence by great circle arc through the southern most point of Duluth, Minn., thence by great circle arc to 45° N., 85° W., thence southward along meridian 85° W., to its intersection with parallel 41° N., thence along parallel 41° N. to its intersection with meridian . . . 82° W., thence by great circle arc through the southernmost point of Bangor, Maine, thence by great circle arc through the southernmost point of Searsport, Maine, at which point it terminates.

Line C. An imaginary line in Alaska approximately paralleling the border with Canada, East of which Commission coordination with Canadian authorities in the assignment of frequencies is generally required. It begins at the intersection of 70° N., 144° W., thence by great circle arc to the intersection of 60° N., 143° W., thence by great circle arc so as to include all the Alaskan Panhandle.

Location and Monitoring Service (LMS). The use of non-voice signaling methods to locate or monitor mobile radio units. LMS systems may transmit and receive voice and nonvoice status and instructional information related to such units.

Major trading areas. Service areas based on the Rand McNally 1992 *Commercial Atlas & Marketing Guide*, 123rd Edition, at pages 38-39, with the following exceptions and additions:

(a) Alaska is separated from the Seattle MTA and is licensed separately.

(b) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.

(c) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.

(d) American Samoa is licensed as a single MTA-like area.

Manufacturers licensee. Persons primarily engaged in any of the following manufacturing activities:

(1) The mechanical or chemical transformation of substances into new products within such establishments as plants, factories, shipyards, or mills which employ, in that process, powerdriven machines and materials-handling equipment;

(2) The assembly of components of manufactured products within such establishments as plants, factories, shipyards, or mills where the new product is neither a new structure nor other fixed improvement. Establishments primarily engaged in the wholesale or retail trade, or in service activities, even though they fabricate or assemble any or all the products or commodities handled, are not included in this category; or

(3) The providing of supporting services or materials by a corporation to its parent corporation, to another subsidiary of its parent or to its own subsidiary, where such supporting services or materials are directly related to those regular activities of such parent or subsidiary which are eligible under paragraphs (1) or (2) of this definition.

Meteor burst communications. Communications by the propagation of radio signals reflected off ionized meteor trails.

Mobile relay station. A base station in the mobile service authorized to retransmit automatically on a mobile service frequency communications which originate on the transmitting frequency of the mobile station.

Mobile repeater station. A mobile station authorized to retransmit automatically on a mobile service frequency, communications to or from hand-carried transmitters.

Mobile service. A service of radio-communication between mobile and base stations, or between mobile stations.

Mobile station. A station in the mobile service intended to be used while in motion or during halts at unspecified points. This includes hand carried transmitters.

Motor carrier licensee. Persons primarily engaged in providing a common

or contract motor carrier transportation service in any of the following activities: Provided, however, that motor vehicles used as taxicabs, livery vehicles, or school buses, and motor vehicles used for sightseeing or special charter purposes, shall not be included within the meaning of this term. For purposes of this definition, an urban area is defined as being one or more contiguous, incorporated or unincorporated cities, boroughs, towns, or villages, having an aggregate population of 2,500 or more persons.

(1) The transportation of passengers between urban areas;

(2) The transportation of property between urban areas;

(3) The transportation of passengers within a single urban area; or

(4) The transportation, local distribution or collection of property within a single urban area.

MTA-based license or MTA license. A license authorizing the right to use a specified block of SMR spectrum within one of the 51 Major Trading Areas ("MTAs"), as embodied in Rand McNally's Trading Area System MTA Diskette and geographically represented in the map contained in Rand McNally's Commercial Atlas & Marketing Guide (the "MTA Map.") The MTA Listings, the MTA Map and the Rand McNally/AMTA license agreement are available for public inspection at the Wireless Telecommunications Bureau's public reference room, Room 628, 1919 M Street NW., Washington, DC 20554.

Multilateration LMS system. A system that is designed to locate vehicles or other objects by measuring the difference of time of arrival, or difference in phase, of signals transmitted from a unit to a number of fixed points or from a number of fixed points to the unit to be located.

Navigable waters. This term, as used in reference to waters of the United States, its territories and possessions, means the waters shoreward of the baseline of its territorial sea and internal waters as contained in 33 CFR 2.05–25.

900 MHz SMR MTA-based license or MTA license. A license authorizing the right to use a specified block of 900 MHz SMR spectrum within one of the

47 Major Trading Areas ("MTAs"), as embodied in Rand McNally's Trading Areas System MTA Diskette and geographically represented in the map contained in Rand McNally's Commercial Atlas & Marketing Guide (the "MTA Map"), with the following exceptions and additions:

(1) Alaska is separated from the Seattle MTA and is licensed separately.

(2) Guam and the Northern Mariana Islands are licensed as a single MTA-like area.

(3) Puerto Rico and the United States Virgin Islands are licensed as a single MTA-like area.

(4) American Samoa is licensed as a single MTA-like area.

The MTA map is available for public inspection in the Office of Engineering and Technology's Technical Information Center, room 7317, 2025 M Street NW., Washington, DC.

Non-multilateration LMS System. A system that employs any of a number of non-multilateration technologies to transmit information to and/or from vehicular units.

Operational fixed station. A fixed station, not open to public correspondence, operated by, and for the sole use of those agencies operating their own radiocommunication facilities in the Public Safety, Industrial, Land Transportation, Marine, or Aviation Radio Services. (This includes all stations in the fixed service under this part.)

Output power. The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load of the impedance recommended by the manufacturer.

Paging. A one-way communications service from a base station to mobile or fixed receivers that provide signaling or information transfer by such means as tone, tone-voice, tactile, optical readout, etc.

Person. An individual, partnership, association, joint stock company, trust or corporation.

Petroleum licensee. Persons primarily engaged in prospecting for, producing, collecting, refining, or transporting by means of pipeline, petroleum or petroleum products (including natural gas).

Police licensee. Any territory, possession, state, city, county, town, or simi-

lar governmental entity including a governmental institution authorized by law to provide its own police protection that operate radio stations for transmission of communications essential to official police activities.

Power licensee. Persons primarily engaged in any of the following activities:

(1) The generation, transmission, or distribution of electrical energy for use by the general public or by the members of a cooperative organization;

(2) The distribution of manufactured or natural gas by means of pipe line, for use by the general public or by the members of a cooperative organization, or, in a combination of that activity with the production, transmission or storage of manufactured or natural gas preparatory to such distribution;

(3) The distribution of steam by means of pipeline or, of water by means of pipeline, canal, or open ditch, for use by the general public or by the members of a cooperative organization, or in a combination of that activity with the collection, transmission, storage, or purification of water or the generation of steam preparatory to such distribution; or

(4) The providing of a supporting service by a corporation directly related to activities of its parent corporation, of another subsidiary of the same parent, or of its own subsidiary, where the party served is regularly engaged in any of the activities set forth in this definition.

Private carrier. An entity licensed in the private services and authorized to provide communications service to other private services on a commercial basis.

Radio call box. A transmitter used by the public to request fire, police, medical, road service, or other emergency assistance.

Radiodetermination. The determination of position, or the obtaining of information relating to position, by means of the propagation of radio waves.

Radiofacsimile. A system of radio-communication for the transmission of fixed images, with or without halftones, with a view to their reproduction in a permanent form.

Radiolocation. Radiodetermination used for purposes other than those of radionavigation.

Radionavigation. Radiodetermination used for the purposes of navigation, including obstruction warning.

Radio teleprinting. Radio transmissions to a printing telegraphic instrument having a signal-actuated mechanism for automatically printing received messages.

Railroad licensee. Railroad common carriers which are regularly engaged in the transportation of passengers or property when such passengers or property are transported over all or part of their route by railroad.

Regional Economic Area Groupings (REAGs). The six geographic areas for Regional licensing in the 220–222 MHz band, based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas (see 60 FR 13114 (March 10, 1995)) defined as of February 1995, and specified as follows:

REAG 1 (Northeast): REAG 1 consists of the following EAs: EA 001 (Bangor, ME) through EA 011 (Harrisburg-Lebanon-Carlisle, PA); and EA 054 (Erie, PA).

REAG 2 (Mid-Atlantic): REAG 2 consists of the following EAs: EA 012 (Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD) through EA 026 (Charleston-North Charleston, SC); EA 041 (Greenville-Spartanburg-Anderson, SC-NC); EA 042 (Asheville, NC); EA 044 (Knoxville, TN) through EA 053 (Pittsburgh, PA-WV); and EA 070 (Louisville, KY-IN).

REAG 3 (Southeast): REAG 3 consists of the following EAs: EA 027 (Augusta-Aiken, GA-SC) through EA 040 (Atlanta, GA-AL-NC); EA 043 (Chattanooga, TN-GA); EA 069 (Evansville-Henderson, IN-KY-IL); EA 071 (Nashville, TN-KY) through EA 086 (Lake Charles, LA); EA 088 (Shreveport-Bossier City, LA-AR) through EA 090 (Little Rock-North Little Rock, AR); EA 095 (Jonesboro, AR-MO); EA 096 (St. Louis, MO-IL); and EA 174 (Puerto Rico and the U.S. Virgin Islands).

REAG 4 (Great Lakes): REAG 4 consists of the following EAs: EA 055 (Cleveland-Akron, OH-PA) through EA 068 (Champaign-Urbana, IL); EA 097 (Springfield, IL-MO); and EA 100 (Des

Moines, IA-IL-MO) through EA 109 (Duluth-Superior, MN-WI).

REAG 5 (Central/Mountain): REAG 5 consists of the following EAs: EA 087 (Beaumont-Port Arthur, TX); EA 091 (Forth Smith, AR-OK) through EA 094 (Springfield, MO); EA 098 (Columbia, MO); EA 099 (Kansas City, MO-KS); EA 110 (Grand Forks, ND-MN) through EA 146 (Missoula, MT); EA 148 (Idaho Falls, ID-WY); EA 149 (Twin Falls, ID); EA 152 (Salt Lake City-Ogden, UT-ID); and EA 154 (Flagstaff, AZ-UT) through EA 159 (Tucson, AZ).

REAG 6 (Pacific): REAG 6 consists of the following EAs: EA 147 (Spokane, WA-ID); EA 150 (Boise City, ID-OR); EA 151 (Reno, NV-CA); EA 153 (Las Vegas, NV-AZ-UT); EA 160 (Los Angeles-Riverside-Orange County, CA-AZ) through EA 173 (Guam and the Northern Mariana Islands); and EA 175 (American Samoa).

Regional license. A license authorizing the right to use a specified block of 220–222 MHz spectrum within one of six Regional Economic Area Groupings (REAGs).

Relay press licensee. Persons primarily engaged in the publication of a newspaper or in the operation of an established press association.

Secondary operation. Radio communications which may not cause interference to operations authorized on a primary basis and which are not protected from interference from those primary operations.

Signal booster. A device at a fixed location which automatically receives, amplifies, and retransmits on a one-way or two-way basis, the signals received from base, fixed, mobile, and portable stations, with no change in frequency or authorized bandwidth. A signal booster may be either narrowband (Class A), in which case the booster amplifies only those discrete frequencies intended to be retransmitted, or broadband (Class B), in which case all signals within the passband of the signal booster filter are amplified.

Special industrial licensee. Persons regularly engaged in any of the following activities:

(1) The operation of farms, ranches, or similar land areas, for the quantity production of crops or plants; vines or

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trees (excluding forestry operations); or for the keeping, grazing or feeding of livestock for animal products, animal increase, or value enhancement;

(2) Plowing, soil conditioning, seeding, fertilizing, or harvesting for agricultural activities;

(3) Spraying or dusting of insecticides, herbicides, or fungicides, in areas other than enclosed structures;

(4) Livestock breeding service;

(5) The operation of a commercial business regularly engaged in the construction of roads, bridges, sewer systems, pipelines, airfields, or water, oil, gas, or power production, collection, or distribution systems. The construction of buildings is not included in this category;

(6) The operation of mines for the recovery of solid fuels, minerals, metal, rock, sand and gravel from the earth or the sea, including the exploration for and development of mining properties;

(7) Maintaining, patrolling or repairing gas or liquid transmission pipelines, tank cars, water or waste disposal wells, industrial storage tanks, or distribution systems of public utilities;

(8) Acidizing, cementing, logging, perforating, or shooting activities, and services of a similar nature incident to the drilling of new oil or gas wells, or the maintenance of production from established wells;

(9) Supplying chemicals, mud, tools, pipe, and other materials or equipment unique to the petroleum and gas production industry, as the primary activity of the applicant if delivery, installation or application of these materials requires the use of specifically fitted conveyances;

(10) The delivery of ice or fuel to the consumer for heating, lighting, refrigeration or power generation purposes, by means other than pipelines or railroads when such products are not to be resold following their delivery; or

(11) The delivery and pouring of ready mixed concrete or hot asphalt mix.

Specialized Mobile Radio system. A radio system in which licensees provide land mobile communications services (other than radiolocation services) in the 800 MHz and 900 MHz bands on a commercial basis to entities eligible to

be licensed under this part, Federal Government entities, and individuals.

SMSA (Standard Metropolitan Statistical Area). A city of 50,000 or more population and the surrounding counties.

Station authorization. A license issued by the Commission for the operation of a radio station.

Taxicab licensee. Persons regularly engaged in furnishing to the public for hire a nonscheduled passenger land transportation service (which may also include the occasional transport of small items of property) not operated over a regular route or between established terminals.

Telecommand. The transmission of non voice signals for the purpose of remotely controlling a device.

Telemetry (also telemetry). The transmission of non-voice signals for the purpose of automatically indicating or recording measurements at a distance from the measuring instrument.

Telephone maintenance licensee. Communications common carriers engaged in the provision of landline local exchange telephone service, or interexchange communications service, or who provide wire-telegraph service, and radio communications common carriers authorized in the Point-to-Point Microwave Radio Service under part 21 of this chapter. Resellers that do not own or control transmission facilities is not included in this category.

Travelers' information station. A base station in the Local Government Radio Service used to transmit non-commercial, voice information pertaining to traffic and road conditions, traffic hazard and traveler advisories, directions, availability of lodging, rest stops, and service stations, and descriptions of local points of interest.

Trunk (telephony). A one or two-way channel provided as a common traffic artery between switching equipment.

Trunk group. All of the trunks of a given type of characteristic that extend between two switching points.

Trunked radio system. A method of operation in which a number of radio frequency channel pairs are assigned to mobile and base stations in the system for use as a trunk group.

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220 MHz service. The radio service for the licensing of frequencies in the 220–222 MHz band.

Urbanized area. A city and the surrounding closely settled territories.

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.7, see the List of CFR Sections Affected in the Finding Aids section of this volume.

EFFECTIVE DATE NOTE: At 62 FR 18844, Apr. 17, 1997, § 90.7 was amended by adding definitions for Automobile emergency licensee, Emergency medical licensee, Film and video production licensee, Fire licensee, Forest products licensee, Frequency coordination, Manufacturers licensee, Motor carrier licensee, Petroleum licensee, Police licensee, Power licensee, Railroad licensee, Relay press licensee, Special industrial licensee, Taxicab licensee, and Telephone maintenance licensee in alphabetical order, effective Oct. 17, 1997.

Subpart B—Public Safety Radio Pool

SOURCE: 62 FR 18845, Apr. 17, 1997, unless otherwise noted.

EFFECTIVE DATE NOTE: At 62 FR 18845, Apr. 17, 1997, subpart B, formerly consisting of §§ 90.15–90.27, was revised, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth following the revised text.

§ 90.15 Scope.

The Public Safety Radio Pool covers the licensing of the radio communications of governmental entities and the following category of activities: Medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated places, and emergency repair of public communications facilities. Entities not meeting these eligibility criteria may also be licensed in the Public Safety Radio Pool solely to provide service to eligibles on one-way paging-only frequencies below 800 MHz, *i.e.*, those frequencies with the assignment limitations appearing at § 90.20(d)(13) or (d)(60). Private carrier systems licensed on other channels prior to June 1, 1990, may continue to provide radio communications service to eligibles. Rules as

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to eligibility for licensing, frequencies available, permissible communications and classes and number of stations, and any special requirements are set forth in the following sections.

§ 90.16 Public Safety National Plan.

The Commission has established a National Plan which specifies special policies and procedures governing the Public Safety Pool (formally Public Safety Radio Services and the Special Emergency Radio Service). The National Plan is contained in the Report and Order in General Docket No. 87–112. The principal spectrum resource for the National Plan is the 821–824 MHz and the 866–869 MHz bands. The National plan establishes planning regions covering all parts of the United States, Puerto Rico, and the U.S. Virgin Islands. No assignments will be made in the 821–824 MHz and 866–869 MHz bands until a regional plan for the area has been accepted by the Commission.

§ 90.20 Public Safety Pool.

(a) **Eligibility.** The following are eligible to hold authorizations in the Public Safety Pool.

(1) Any territory, possession, state, city, county, town or similar governmental entity is eligible to hold authorizations in the Public Safety Pool to operate radio stations for transmission of communications essential to official activities of the licensee, including:

(i) A district and an authority, but not including a school district or authority or a park district or authority except as provided for in § 90.242;

(ii) A governmental institution authorized by law to provide its own police protection;

(iii) Persons or entities engaged in the provision of basic or advanced life support services on an ongoing basis are eligible to hold authorization to operate stations for transmission of communications essential for the delivery or rendition of emergency medical services for the provision of basic or advanced life support. Applications submitted by persons or organizations (governmental or otherwise) other than

the governmental body having jurisdiction over the state's emergency medical service plans must be accompanied by a statement prepared by the governmental body having jurisdiction over the state's emergency medical services plan indicating that the applicant is included in the state's emergency plan or otherwise supporting the application;

(iv) Governmental entities and governmental agencies for their own medical activities; and

(v) Governmental entities and governmental agencies for providing medical services communications to other eligible persons through direct participation in and direct operational control of the system, such as through central dispatch service.

(2) Persons or organizations other than governmental entities are eligible to hold authorizations in the Public Safety Pool to operate radio stations for transmission of communications, as listed below. When requesting frequencies not designated by a "PS" in the coordinator column of the frequency table in paragraph (c)(3) of this section, applications must be accompanied by a statement from the governmental entity having legal jurisdiction over the area to be served, supporting the request:

(i) Persons or organizations charged with specific fire protection activities;

(ii) Persons or organizations charged with specific forestry-conservation activities;

(iii) Persons or organizations, listed below, engaged in the delivery or rendition of medical services to the public and on a secondary basis, for transmission of messages related to the efficient administration of organizations and facilities engaged in medical services operations:

(A) Hospital establishments that offer services, facilities, and beds for use beyond 24 hours in rendering medical treatment;

(B) Institutions and organizations regularly engaged in providing medical services through clinics, public health facilities, and similar establishments;

(C) Ambulance companies regularly engaged in providing medical ambulance services;

(D) Rescue organizations for the limited purpose of participation in providing medical services;

(E) Associations comprised of two or more of the organizations eligible under paragraph (a)(2)(iii) (A), (B), (C), and (D) of this section, for the purpose of active participation in and direct operational control of the medical services communication activities of such organizations; or

(F) Physicians, schools of medicine, oral surgeons, and associations of physicians or oral surgeons;

(iv) Persons or organizations operating a rescue squad for transmission of messages pertaining to the safety of life or property and urgent messages necessary for the rendition of an efficient emergency rescue service.

(A) Each rescue squad will normally be authorized to operate one base station, and a number of mobile units (excluding hand carried mobile units) not exceeding the number of vehicles actually used in emergency rescue operations.

(B) In addition, each rescue squad will be authorized to operate a number of hand carried mobile units not exceeding two such units for each radio equipped vehicle actually used in emergency rescue operations.

(v) *Persons with disabilities.* The initial application from a person claiming eligibility under this paragraph shall be accompanied by a statement from a physician attesting to the condition of the applicant or the applicant's child (or ward in case of guardianship).

(A) Any person having a hearing deficiency such that average hearing threshold levels are 90 dB above ANSI (American National Standards Institute) 1969 or ISO (International Standards Organization) 1964 levels and such other persons who submit medical certification of similar hearing deficiency.

(B) Any person having visual acuity corrected to no better than 20/200 in the better eye or having a field of vision of less than 20 degrees.

(C) Any person, who, through loss of limbs or motor function, is confined to a wheelchair, or is non-ambulatory.

(D) Any person actively awaiting an organ transplant.

(E) Parents or guardians of persons under 18 years eligible under paragraphs (a)(2)(v)(A), (a)(2)(v)(B), (a)(2)(v)(C) of this section, or institutions devoted to the care or training of those persons.

(vi) A veterinarian, veterinary clinic, or a school of veterinary medicine for the transmission of messages pertaining to the care and treatment of animals. Each licensee may be authorized to operate one base station and two mobile units. Additional base stations or mobile units will be authorized only on a showing of need.

(vii) Organizations established for disaster relief purposes having an emergency radio communications plan for the transmission of communications relating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of the emergency situation during periods of actual or impending emergency, or disaster, and until substantially normal conditions are restored. In addition, the stations may be used for training exercises, incidental to the emergency communications plan, and for operational communications of the disaster relief organization or its chapter affiliates. The initial application from a disaster relief organization shall be accompanied by a copy of the charter or other authority under which the organization was established and a copy of its communications plan. The plan shall fully describe the operation of the radio facilities and describe the method of integration into other communications facilities which normally would be available to assist in the alleviation of the emergency condition.

(viii) Persons or organizations operating school buses on a regular basis over regular routes for the transmission of messages pertaining to either the efficient operation of the school bus service or the safety or general welfare of the students they are engaged in transporting. Each school bus operator may be authorized to operate one base station and a number of mobile units not in excess of the total of the number of buses and maintenance vehicles regularly engaged in the school bus operation. Additional base stations or mobile units will be author-

ized only in exceptional circumstances when the applicant can show a specific need.

(ix) Persons or organizations operating beach patrols having responsibility for life-saving activities for the transmission of messages required for the safety of life or property.

(x) Persons or organizations maintaining establishment in isolated areas where public communications facilities are not available and where the use of radio is the only feasible means of establishing communication with a center of population, or other point from which emergency assistance might be obtained if needed, for the transmission of messages only during an actual or impending emergency endangering life, health or property for the transmission of essential communications arising from the emergency. The transmission of routine or non-emergency communications is strictly prohibited.

(A) *Special eligibility showing.* The initial application requesting a station authorization for an establishment in an isolated area shall be accompanied by a statement describing the status of public communication facilities in the area of the applicant's establishment; the results of any attempts the applicant may have made to obtain public communication service, and; in the event radio communications service is to be furnished under paragraph (a)(2)(x)(C)(2) of this section, a copy of the agreement involved must be submitted.

(B) *Class and number of stations available.* Persons or organizations in this category may be authorized to operate not more than one fixed station at any isolated establishment and not more than one fixed station in a center of population.

(C) *Communication service rendered and received.* (1) The licensee of a station at any establishment in an isolated area shall make the communication facilities of such station available at no charge to any person desiring the transmission of any communication permitted by paragraph (a) of this section.

(2) For the purpose of providing the communications link desired the licensee of a station at an establishment

in an isolated area either may be the licensee of a similar station at another location or may obtain communication service under a mutual agreement from the licensee of any station in the Public Safety Pool or any other station which is authorized to communicate with the fixed station.

(xi) A communications common carrier operating communications circuits that normally carry essential communication of such a nature that their disruption would endanger life or public property is eligible to hold authorizations for standby radio facilities for the transmission of messages only during periods when the normal circuits are inoperative due to circumstances beyond the control of the user. During such periods the radio facilities may be used to transmit any communication which would be carried by the regular circuit. Initial applications for authorization to operate a standby radio facility must include a statement describing radio communication facilities desired, the proposed method of operation, a description of the messages normally being carried, and an explanation of how their disruption will endanger life or public property.

(xii) Communications common carriers for radio facilities to be used in effecting expeditious repairs to interruption of public communications facilities where such interruptions have resulted in disabling intercity circuits or service to a multiplicity of subscribers in a general area. Stations authorized under this section may be used only when no other means of communication is readily available, for the transmission of messages relating to the safety of life and property and messages which are necessary for the efficient restoration of the public communication facilities which have been disrupted.

(xiii) Persons or entities engaged in the provision of basic or advanced life support services on an ongoing basis are eligible to hold authorization to operate stations for transmission of communications essential for the delivery or rendition of emergency medical services for the provision of basic or advanced life support. Applications submitted by persons or organizations (governmental or otherwise) other than

the governmental body having jurisdiction over the state's emergency medical service plans must be accompanied by a statement prepared by the governmental body having jurisdiction over the state's emergency medical services plan indicating that the applicant is included in the state's emergency plan or otherwise supporting the application.

(b) *International police radio-communication.* Police licensees which are located in close proximity to the borders of the United States may be authorized to communicate internationally. Request for such authority shall be written and signed and submitted in duplicate. The request shall include information as to the station with which communication will be conducted, and the frequency, power, emission, etc., that will be used. If authorized, such international communication must be conducted in accordance with Article 5 of the Inter-American Radio Agreement, Washington, DC, 1949, which reads as follows:

Article 5. *Police radio stations.* When the American countries authorize their police radio stations to exchange emergency information by radio with similar stations of another country, the following rules shall be applied.

(a) Only police radio stations located close to the boundaries of contiguous countries shall be allowed to exchange this information.

(b) In general, only important police messages shall be handled, such as those which would lose their value, because of slowness and time limitations if sent on other communication systems.

(c) Frequencies used for radiotelephone communications with mobile police units shall not be used for radiotelegraph communications.

(d) Radiotelephone communications shall be conducted only on frequencies assigned for radiotelephony.

(e) Radiotelegraph communications shall be conducted on the following frequencies: 2804 kHz calling, 2808 kHz working, 2812 kHz working, 5195 kHz day calling, 5185 kHz day working, 5140 kHz day working.

(f) The characteristics of police radio stations authorized to exchange information shall be notified to the International Telecommunication Union, Geneva, Switzerland.

(g) The abbreviations contained in Appendix 9 of the Atlantic City Radio Regulations shall be used to the greatest possible extent.

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Service indications are as follows: “P”, priority, for messages that are to be sent immediately, regardless of the number of other messages on file. If no service indication is given, the messages are to be transmitted in the order of receipt.

(h) The message shall contain the preamble, address, text and signature, as follows:

Preamble. The preamble of the message shall consist of the following: The serial number preceded by the letters “NR”, service indications, as appropriate; the group count according to standard cable count system; the letters “CK”, followed by numerals indicating the number of words contained in the text of the message: Office and country of origin (not abbreviations): Day, month, and hour of filing;

Address. The address must be as complete as possible and shall include the name of the addressee with any supplementary particulars necessary for immediate delivery of the message;

Text. The text may be either in plain language or code;

Signature. The signature shall include the name and title of the person originating the message.

(c) *Public Safety frequencies.* (1) The following table indicates frequencies available for assignment to Public Safety stations, together with the class of station(s) to which they are normally assigned, the specific assignment limitations which are explained in paragraph (d) of this section, and the certified frequency coordinator for each frequency:

(2)(i) The letter symbol(s) listed in the Coordinator column of the frequency table in paragraph (c)(3) of this section specifies the frequency coordinator(s) for each frequency as follows:

PF—Fire Coordinator
PH—Highway Maintenance Coordinator
PM—Emergency Medical Coordinator
PO—Forestry-Conservation Coordinator
PP—Police Coordinator
PS—Special Emergency Coordinator
PX—Any Public Safety Coordinator, except the Special Emergency Coordinator

(ii) Frequencies without any coordinator specified may be coordinated by any coordinator certified in the Public Safety Pool.

(3) *Frequencies.*

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PUBLIC SAFETY POOL FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations	Coordinator
Kilohertz			
530 .....	.....	1	PX
1610	Base (T.I.S.)	1	PX
1630	Base or mobile .....	.....	PF
1722 .....	.....do	2, 3	PP
1730 .....	.....do	2, 3	PP
2212 .....	.....do	4	PO
2226 .....	.....do	4	PO
2236 .....	.....do	4	PO
2244 .....	.....do	4	PO
2366 .....	.....do	2, 4	PP
2382 .....	.....do	2	PP
2390 .....	.....do	2, 4	PP
2406 .....	.....do	2	PP
2430 .....	.....do	2	PP
2442 .....	.....do	2	PP
2450 .....	.....do	2	PP
2458 .....	.....do	2	PP
2482 .....	.....do	2	PP
2490 .....	.....do	2, 3	PP
2726 .....	.....do	5	PX, PS
3201 .....	.....do .....	.....	PS
2000 to 3000 ..	Fixed	75	PS
2000 to 10,000	Fixed, base, or mobile.	6	PX
Megahertz			
30.86	Base or mobile	7	PO
30.90 .....	.....do	7	PO
30.94 .....	.....do	7	PO
30.98 .....	.....do	7	PO
31.02 .....	.....do	7	PO
31.06 .....	.....do	7, 8, 9	PO
31.10 .....	.....do	7, 8, 9	PO
31.14 .....	.....do	7, 8, 9	PO
31.18 .....	.....do	8, 9	PO
31.22 .....	.....do	8, 9	PO
31.26 .....	.....do	8, 9	PO
31.30 .....	.....do	8, 9	PO
31.34 .....	.....do	8, 9	PO
31.38 .....	.....do	8, 9	PO
31.42 .....	.....do	8, 9	PO
31.46 .....	.....do	8, 9	PO
31.50 .....	.....do	8, 9	PO
31.54 .....	.....do	8, 9	PO
31.58 .....	.....do	8, 9	PO
31.62 .....	.....do	8, 9	PO
31.66 .....	.....do	8, 9	PO
31.70 .....	.....do	8, 9	PO
31.74 .....	.....do	8, 9	PO
31.78 .....	.....do	8, 9	PO
31.82 .....	.....do	8, 9	PO
31.86 .....	.....do	8, 9	PO
31.90 .....	.....do	8, 9	PO
31.94 .....	.....do	8, 9	PO
31.98 .....	.....do	8, 9	PO
33.02 .....	.....do	10	PH, PS
33.04 .....	.....do .....	.....	PS
33.06 .....	.....do	10	PH, PS
33.08 .....	.....do .....	.....	PS
33.10 .....	.....do	10	PH, PS
33.42	Mobile or fixed	11	PF
33.44	Base or mobile .....	.....	PF
33.46	Mobile	PF
33.48	Base or mobile	PF
33.50	Mobile	PF
33.52	Base or mobile	PF

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Frequency or band	Class of station(s)	Limitations	Coordinating
33.54	Mobile		PF
33.56	Base or mobile		PF
33.58	Mobile		PF
33.60	Base or mobile		PF
33.62	Mobile		PF
33.64	Base or mobile		PF
33.66	Mobile		PF
33.68	Base or mobile		PF
33.70	do		PF
33.72	do		PF
33.74	do		PF
33.76	do		PF
33.78	do		PF
33.80	do		PF
33.82	do		PF
33.84	do		PF
33.86	do		PF
33.88	do		PF
33.90	do		PF
33.92	do		PF
33.94	do		PF
33.96	do		PF
33.98	do		PF
35.02	Mobile	12	PS
35.64	Base	13	PS
35.68	do	13	PS
37.02	Mobile		PP
37.04	Base or mobile		PP
37.06	do		PP
37.08	do		PP
37.10	do		PX
37.12	do		PP
37.14	do		PP
37.16	do		PP
37.18	do		PX
37.20	do		PP
37.22	do		PP
37.24	do		PP
37.26	do		PX
37.28	do		PP
37.30	do		PP
37.32	do		PP
37.34	Mobile		PP
37.36	Base or mobile		PP
37.38	Mobile		PP
37.40	Base or mobile		PP
37.42	Mobile		PP
37.90	Base or mobile	10	PH, PS
37.92	do		PH
37.94	do	10	PH, PS
37.96	do		PH
37.98	do	10	PH, PS
39.02	do		PP
39.04	do		PP
39.06	do	14	PX
39.08	do		PP
39.10	do		PX
39.12	do		PP
39.14	do		PP
39.16	do		PP
39.18	do		PX
39.20	do		PP
39.22	do		PP
39.24	do		PP
39.26	Mobile		PP
39.28	Base or mobile		PP
39.30	Mobile		PP
39.32	Base or mobile		PP
39.34	Mobile		PP
39.36	Base or mobile		PP

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
39.38	Mobile		PP
39.40	Base or mobile		PP
39.42	do		PP
39.44	do		PP
39.46	do	15	PP
39.48	do		PP
39.50	do		PX
39.52	do		PP
39.54	do		PP
39.56	do		PP
39.58	do		PX
39.60	do		PP
39.62	do		PP
39.64	do		PP
39.66	Mobile		PP
39.68	Base or mobile		PP
39.70	Mobile		PP
39.72	Base or mobile		PP
39.74	Mobile		PP
39.76	Base or mobile		PP
39.78	Mobile		PP
39.80	Base or mobile		PP
39.82	do		PX
39.84	do		PP
39.86	do		PP
39.88	do		PP
39.90	do		PX
39.92	do		PP
39.94	do		PP
39.96	do		PP
39.98	do		PX
42.02	do	2, 3, 16	PP
42.04	do	2, 3, 16	PP
42.06	do	2, 3, 16	PP
42.08	do	2, 3, 16	PP
42.10	do	2, 3, 16	PP
42.12	do	2, 3, 16	PP
42.14	do	2, 3, 16	PP
42.16	do	2, 3, 16	PP
42.18	Mobile	2, 16	PP
42.20	do	2, 16	PP
42.22	do	2, 16	PP
42.24	do	2, 16	PP
42.26	do	2, 16	PP
42.28	do	2, 16	PP
42.30	do	2, 16	PP
42.32	Base or mobile	2, 3, 16	PP
42.34	do	2, 3, 16	PP
42.36	do	2, 3, 16	PP
42.38	do	2, 3, 16	PP
42.40	do	2, 3, 16, 27	PP
42.42	do	2, 3, 16	PP
42.44	do	2, 3, 16	PP
42.46	do	2, 3, 16	PP
42.48	do	2, 3, 16	PP
42.50	do	2, 3, 16	PP
42.52	do	2, 3, 16	PP
42.54	do	2, 3, 16	PP
42.56	do	2, 3, 16	PP
42.58	do	2, 3, 16	PP
42.60	do	2, 3, 16	PP
42.62	do	2, 3, 16	PP
42.64	do	2, 3, 16	PP
42.66	Mobile	2, 16	PP
42.68	do	2, 16	PP
42.70	do	2, 16	PP
42.72	do	2, 16	PP
42.74	do	2, 16	PP
42.76	do	2, 16	PP

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
42.78 .....	.....do	2, 16	PP
42.80	Base or mobile	13	PP
42.82 .....	.....do	2, 3, 16	PP
42.84 .....	.....do	2, 3, 16	PP
42.86 .....	.....do	2, 3, 16	PP
42.88 .....	.....do	2, 3, 16	PP
42.90 .....	.....do	2, 3, 16	PP
42.92 .....	.....do	2, 3, 16	PP
42.94 .....	.....do	2, 3, 16	PP
43.64	Base	13, 18	PS
43.68 .....	.....do	13	PS
44.62	Base or mobile	2, 3, 16	PP
44.64 .....	.....do .....	.....	PO
44.66 .....	.....do	2, 3, 16	PP
44.68 .....	.....do .....	.....	PO
44.70 .....	.....do	2, 3, 16	PP
44.72 .....	.....do .....	.....	PO
44.74 .....	.....do	2, 3, 16	PP
44.76 .....	.....do .....	.....	PO
44.78	Mobile	2, 16	PP
44.80	Base or mobile	.....	PO
44.82	Mobile	2, 16	PP
44.84	Base or mobile	.....	PO
44.86	Mobile	2, 16	PP
44.88	Base or mobile	.....	PO
44.90	Mobile	2, 16	PP
44.92	Base or mobile	.....	PO
44.94 .....	.....do	2, 3, 16	PP
44.96 .....	.....do .....	.....	PO
44.98 .....	.....do	2, 3, 16	PP
45.00 .....	.....do .....	.....	PO
45.02 .....	.....do	2, 3, 16	PP
45.04 .....	.....do .....	.....	PO
45.06 .....	.....do	2, 3, 16	PP
45.08 .....	.....do .....	.....	PX
45.10 .....	.....do .....	.....	PP
45.12 .....	.....do .....	.....	PX
45.14 .....	.....do .....	.....	PP
45.16 .....	.....do .....	.....	PX
45.18 .....	.....do .....	.....	PP
45.20 .....	.....do .....	.....	PX
45.22 .....	.....do .....	.....	PP
45.24 .....	.....do .....	.....	PX
45.26	Mobile .....	.....	PP
45.28	Base or mobile	.....	PX
45.30	Mobile .....	.....	PP
45.32	Base or mobile	.....	PX
45.34	Mobile .....	.....	PP
45.36	Base or mobile	.....	PX
45.38	Mobile .....	.....	PP
45.40	Base or mobile	.....	PX
45.42 .....	.....do .....	.....	PP
45.44 .....	.....do .....	.....	PX
45.46 .....	.....do .....	.....	PP
45.48 .....	.....do .....	.....	PX
45.50 .....	.....do .....	.....	PP
45.52 .....	.....do .....	.....	PX
45.54 .....	.....do .....	.....	PP
45.56 .....	.....do .....	.....	PX
45.58 .....	.....do .....	.....	PP
45.60 .....	.....do .....	.....	PX
45.62 .....	.....do .....	.....	PP
45.64 .....	.....do .....	.....	PX
45.66 .....	.....do .....	.....	PP
45.68 .....	.....do .....	.....	PH
45.70 .....	.....do .....	.....	PP
45.72 .....	.....do .....	.....	PH
45.74	Mobile .....	.....	PP
45.76	Base or mobile	.....	PH
45.78	Mobile .....	.....	PP

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
45.80	Base or mobile	.....	PH
45.82	Mobile .....	.....	PP
45.84	Base or mobile	.....	PH
45.86 .....	.....do	15	PP
45.88 .....	.....do	19	PF
45.90 .....	.....do	20	PP
45.92 .....	.....do	10	PS
45.94 .....	.....do .....	.....	PP
45.96 .....	.....do	10	PS
45.98 .....	.....do .....	.....	PP
46.00 .....	.....do	10	PS
46.02 .....	.....do .....	.....	PP
46.04 .....	.....do	10	PS
46.06 .....	.....do .....	.....	PF
46.08 .....	.....do .....	.....	PF
46.10 .....	.....do .....	.....	PF
46.12 .....	.....do .....	.....	PF
46.14 .....	.....do .....	.....	PF
46.16 .....	.....do .....	.....	PF
46.18 .....	.....do .....	.....	PF
46.20 .....	.....do .....	.....	PF
46.22	Mobile .....	.....	PF
46.24 .....	.....do .....	.....	PF
46.26 .....	.....do .....	.....	PF
46.28 .....	.....do .....	.....	PF
46.30	Mobile or fixed	11	PF
46.32	Mobile .....	.....	PF
46.34 .....	.....do .....	.....	PF
46.36	Base or mobile	.....	PF
46.38 .....	.....do .....	.....	PF
46.40 .....	.....do .....	.....	PF
46.42 .....	.....do .....	.....	PF
46.44 .....	.....do .....	.....	PF
46.46 .....	.....do .....	.....	PF
46.48 .....	.....do .....	.....	PF
46.50 .....	.....do .....	.....	PF
46.52 .....	.....do .....	.....	PX
46.54 .....	.....do .....	.....	PX
46.56 .....	.....do .....	.....	PX
46.58 .....	.....do .....	.....	PX
47.02 .....	.....do	21, 22	PH
47.04 .....	.....do	21, 22	PH
47.06 .....	.....do	21, 22	PH
47.08 .....	.....do	21, 22	PH
47.10 .....	.....do	21, 22	PH
47.12 .....	.....do	21, 22	PH
47.14 .....	.....do	21, 22	PH
47.16 .....	.....do	21, 22	PH
47.18 .....	.....do	21, 22	PH
47.20 .....	.....do	21, 22	PH
47.22 .....	.....do	21, 22	PH
47.24 .....	.....do	21, 22	PH
47.26 .....	.....do	21, 22	PH
47.28 .....	.....do	21, 22	PH
47.30 .....	.....do	21, 22	PH
47.32 .....	.....do	21, 22	PH
47.34 .....	.....do	21, 22	PH
47.36 .....	.....do	21, 22	PH
47.38 .....	.....do	21, 22	PH
47.40 .....	.....do	21, 22	PH
47.42 .....	.....do	10, 23	PS
47.46 .....	.....do	10	PS
47.50 .....	.....do	10	PS
47.54 .....	.....do	10	PS
47.58 .....	.....do	10	PS
47.62do	10	PS
47.66do	10	PS
72.00 to 76.00	Operational fixed.	24	
72.44	Mobile	25	PF

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PUBLIC SAFETY POOL FREQUENCY TABLE—
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Frequency or band	Class of station(s)	Limitations	Coordinating
72.48do	25	PF
72.52 .....	.....do	25	PF
72.56 .....	.....do	25	PF
72.6 .....	.....do	25	PF
75.44 .....	.....do	25	PF
75.48 .....	.....do	25	PF
75.52 .....	.....do	25	PF
75.56 .....	.....do	25	PF
75.6 .....	.....do	25	PF
150 to 170	Base or mobile	26	
150.775	Mobile		PM
150.7825 .....	.....do	27	PM
150.790 .....	.....do		PM
150.7975 .....	.....do		PM
150.805 .....	.....do		PM
150.995	Base or mobile	28	PH
151.0025 .....	.....do	27, 28	PH
151.010 .....	.....do	28	PH
151.0175 .....	.....do	27, 28	PH
151.025 .....	.....do	28	PH
151.0325 .....	.....do	27, 28	PH
151.040 .....	.....do	28	PH
151.0475 .....	.....do	27, 28	PH
151.055 .....	.....do	28	PH
151.070 .....	.....do	28, 30	PH
151.085 .....	.....do	28	PH
151.0925 .....	.....do	27, 28	PH
151.100 .....	.....do	28	PH
151.1075 .....	.....do	27, 28	PH
151.115 .....	.....do	28	PH
151.1225 .....	.....do	27, 28	PH
151.130 .....	.....do	28	PH
151.1375 .....	.....do	27, 28	PH
151.145 .....	.....do	28	PO
151.1525 .....	.....do	27, 28	PO
151.160 .....	.....do	28	PO
151.1675 .....	.....do	27, 28	PO
151.175 .....	.....do	28	PO
151.190 .....	.....do	28, 30	PO
151.205 .....	.....do	28	PO
151.2125 .....	.....do	27, 28	PO
151.220 .....	.....do	28	PO
151.2275 .....	.....do	27, 28	PO
151.235 .....	.....do	28	PO
151.2425 .....	.....do	27, 28	PO
151.250 .....	.....do	28	PO
151.2575 .....	.....do	27, 28	PO
151.265 .....	.....do	28	PO
151.2725 .....	.....do	27, 28	PO
151.280 .....	.....do	28	PO
151.2875 .....	.....do	27, 28	PO
151.295 .....	.....do	28	PO
151.310 .....	.....do	28, 30	PO
151.325 .....	.....do	28	PO
151.3325 .....	.....do	27, 28	PO
151.340 .....	.....do	28	PO
151.3475 .....	.....do	27, 28	PO
151.355 .....	.....do	28	PO
151.3625 .....	.....do	27, 28	PO
151.370 .....	.....do	28	PO
151.3775 .....	.....do	27, 28	PO
151.385 .....	.....do	28	PO
151.3925 .....	.....do	27, 28	PO
151.400 .....	.....do	28	PO
151.4075 .....	.....do	27, 28	PO
151.415 .....	.....do	28	PO
151.4225 .....	.....do	27, 28	PO
151.430 .....	.....do	28	PO
151.4375 .....	.....do	27, 28	PO
151.445 .....	.....do	28	PO

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
151.4525 .....	.....do	27, 28	PO
151.460 .....	.....do	28	PO
151.4675 .....	.....do	27, 28	PO
151.475 .....	.....do	28	PO
151.4825 .....	.....do	27, 28	PO
151.490 .....	.....do	7, 28	PO
151.4975 .....	.....do	7, 27, 28	PO
152.0075	Base	13, 19, 30	PS
153.740	Mobile		PX
153.7475 .....	.....do	27	PX
153.755 .....	.....do		PX
153.7625 .....	.....do	27	PX
153.770 .....	.....do		PF
153.7775 .....	.....do	27	PF
153.785 .....	.....do		PX
153.7925 .....	.....do	27	PX
153.800 .....	.....do		PX
153.8075 .....	.....do	27	PX
153.815 .....	.....do		PX
153.8225 .....	.....do	27	PX
153.830 .....	.....do	31	PF
153.8375 .....	.....do	27, 31	PF
153.845 .....	.....do		PX
153.8525 .....	.....do	27	PX
153.860 .....	.....do		PX
153.8675 .....	.....do	27	PX
153.875 .....	.....do		PX
153.8825 .....	.....do	27	PX
153.890 .....	.....do		PF
153.8975 .....	.....do	27	PF
153.905 .....	.....do		PX
153.9125 .....	.....do	27	PX
153.920 .....	.....do		PX
153.9275 .....	.....do	27	PX
153.935 .....	.....do		PX
153.9425 .....	.....do	27	PX
153.950 .....	.....do		PF
153.9575 .....	.....do	27	PF
153.965 .....	.....do		PX
153.9725 .....	.....do	27	PX
153.980 .....	.....do		PX
153.9875 .....	.....do	27	PX
153.995 .....	.....do		PX
154.0025 .....	.....do	27	PX
154.010 .....	.....do		PF
154.0175 .....	.....do	27	PF
154.025	Base or mobile		PX
154.0325 .....	.....do	27	PX
154.040 .....	.....do	28	PX
154.0475 .....	.....do	27, 28	PX
154.055 .....	.....do	28	PX
154.0625 .....	.....do	27, 28	PX
154.070	Mobile	28	PF
154.0775 .....	.....do	27, 28	PF
154.085	Base or mobile	28	PX
154.0925 .....	.....do	27, 28	PX
154.100 .....	.....do	28	PX
154.1075 .....	.....do	27, 28	PX
154.115 .....	.....do	28	PX
154.1225 .....	.....do	27, 28	PX
154.130 .....	.....do	28	PF
154.1375 .....	.....do	27, 28	PF
154.145 .....	.....do	28	PF
154.1525 .....	.....do	27, 28	PF
154.160 .....	.....do	28	PF
154.1675 .....	.....do	27, 28	PF
154.175 .....	.....do	28	PF
154.1825 .....	.....do	27, 28	PF
154.190 .....	.....do	28	PF
154.1975 .....	.....do	27, 28	PF

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
154.205 .....	.....do	28	PF
154.2125 .....	.....do	27, 28	PF
154.220 .....	.....do	28	PF
154.2275 .....	.....do	27, 28	PF
154.235 .....	.....do	28	PF
154.2425 .....	.....do	27, 28	PF
154.250 .....	.....do	28	PF
154.2575 .....	.....do	27, 28	PF
154.265 .....	.....do	19, 28	PF
154.2725 .....	.....do	19, 27, 28	PF
154.280 .....	.....do	19, 28	PF
154.2875 .....	.....do	19, 27, 28	PF
154.295 .....	.....do	19, 28	PF
154.3025 .....	.....do	19, 27, 28	PF
154.310 .....	.....do	28	PF
154.3175 .....	.....do	27, 28	PF
154.325 .....	.....do	28	PF
154.3325 .....	.....do	27, 28	PF
154.340 .....	.....do	28	PF
154.3475 .....	.....do	27, 28	PF
154.355 .....	.....do	28	PF
154.3625 .....	.....do	27, 28	PF
154.370 .....	.....do	28	PF
154.3775 .....	.....do	27, 28	PF
154.385 .....	.....do	28	PF
154.3925 .....	.....do	27, 28	PF
154.400 .....	.....do	28	PF
154.4075 .....	.....do	27, 28	PF
154.415 .....	.....do	28	PF
154.4225 .....	.....do	27, 28	PF
154.430 .....	.....do	28	PF
154.4375 .....	.....do	27, 28	PF
154.445 .....	.....do	28	PF
154.4525 .....	.....do	27, 28	PF
154.45625	Fixed or mobile	32, 33, 34, 35,	PX
154.46375 .....	.....do	33, 34, 35, 36, 37,	PX
154.47125 .....	.....do	33, 34, 35, 36,	PX
154.47875 .....	.....do	33, 34, 35, 37,	PX
154.650	Mobile .....	.....	PP
154.6575 .....	.....do	27	PP
154.665	Base or mobile	16	PP
154.6725 .....	.....do	16, 27	PP
154.680 .....	.....do	16	PP
154.6875 .....	.....do	16, 27	PP
154.695 .....	.....do	16	PP
154.7025 .....	.....do	16, 27	PP
154.710	Mobile .....	.....	PP
154.7175 .....	.....do	27	PP
154.725	Base or mobile	.....	PP
154.7325 .....	.....do	27	PP
154.740 .....	.....do .....	.....	PP
154.7475 .....	.....do	27	PP
154.755 .....	.....do .....	.....	PP
154.7625 .....	.....do	27	PP
154.770	Mobile .....	.....	PP
154.7775 .....	.....do	27	PP
154.785	Base or mobile	.....	PP
154.7925 .....	.....do	27	PP
154.800 .....	.....do .....	.....	PP
154.8075 .....	.....do	27	PP
154.815 .....	.....do .....	.....	PP
154.8225 .....	.....do	27	PP
154.830	Mobile .....	.....	PP
154.8375 .....	.....do	27	PP
154.845	Base or mobile	.....	PP
154.8525 .....	.....do	27	PP

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
154.860 .....	.....do .....	.....	PP
154.8675 .....	.....do	27	PP
154.875 .....	.....do .....	.....	PP
154.8825 .....	.....do	27	PP
154.890	Mobile .....	.....	PP
154.8975 .....	.....do	27	PP
154.905	Base or mobile	16	PP
154.9125 .....	.....do	16, 27	PP
154.920 .....	.....do	16	PP
154.9275 .....	.....do	16, 27	PP
154.935 .....	.....do	16	PP
154.9425 .....	.....do	16, 27	PP
154.950	Mobile .....	.....	PP
154.9575 .....	.....do	27	PP
154.965	Base or mobile	.....	PX
154.9725 .....	.....do	27	PX
154.980 .....	.....do .....	.....	PX
154.9875 .....	.....do	27	PX
154.995 .....	.....do .....	.....	PX
155.0025 .....	.....do	27	PX
155.010 .....	.....do .....	.....	PP
155.0175 .....	.....do	27	PP
155.025 .....	.....do .....	.....	PX
155.0325 .....	.....do	27	PX
155.040 .....	.....do .....	.....	PX
155.0475 .....	.....do	27	PX
155.055 .....	.....do .....	.....	PX
155.0625 .....	.....do	27	PX
155.070 .....	.....do .....	.....	PP
155.0775 .....	.....do	27	PP
155.085 .....	.....do .....	.....	PX
155.0925 .....	.....do	27	PX
155.100 .....	.....do .....	.....	PX
155.1075 .....	.....do	27	PX
155.115 .....	.....do .....	.....	PX
155.1225 .....	.....do	27	PX
155.130 .....	.....do .....	.....	PP
155.1375 .....	.....do	27	PP
155.145 .....	.....do .....	.....	PX
155.1525 .....	.....do	27	PX
155.160 .....	.....do	10	PS
155.1675 .....	.....do	10, 27	PS
155.175 .....	.....do	10	PS
155.1825 .....	.....do	10, 27	PS
155.190 .....	.....do .....	.....	PP
155.1975 .....	.....do	27	PP
155.205 .....	.....do	10	PS
155.2125 .....	.....do	10, 27	PS
155.220 .....	.....do	10	PS
155.2275 .....	.....do	10, 27	PS
155.235 .....	.....do	10	PS
155.2425 .....	.....do	10, 27	PS
155.250 .....	.....do .....	.....	PP
155.2575 .....	.....do	27	PP
155.265 .....	.....do	10	PS
155.2725 .....	.....do	10, 27	PS
155.280 .....	.....do	10	PS
155.2875 .....	.....do	10, 27	PS
155.295 .....	.....do	10	PS
155.3025 .....	.....do	10, 27	PS
155.310 .....	.....do .....	.....	PP
155.3175 .....	.....do	27	PP
155.325 .....	.....do	38, 39	PM
155.3325 .....	.....do	27, 38, 39	PM
155.340 .....	.....do	39, 40	PM
155.3475do	27, 39, 40	PM
155.355do	38, 39	PM
155.3625do	27, 38, 39	PM
155.370do	PP
155.3775do	27	PP

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PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
155.385 .....	.....do	38, 39	PM
155.3925 .....	.....do	27, 38, 39	PM
155.400 .....	.....do	38, 39	PM
155.4075 .....	.....do	27, 38, 39	PM
155.415 .....	.....do .....	.....	PP
155.4225 .....	.....do	27	PP
155.430 .....	.....do .....	.....	PP
155.4375 .....	.....do	27	PP
155.445 .....	.....do	16	PP
155.4525 .....	.....do	16, 27	PP
155.460 .....	.....do	16	PP
155.4675 .....	.....do	16, 27	PP
155.475 .....	.....do	41	PP
155.4825 .....	.....do	27, 41	PP
155.490 .....	.....do .....	.....	PP
155.4975 .....	.....do	27	PP
155.505 .....	.....do	16	PP
155.5125 .....	.....do	16, 27	PP
155.520 .....	.....do .....	.....	PP
155.5275 .....	.....do	27	PP
155.535 .....	.....do .....	.....	PP
155.5425 .....	.....do	27	PP
155.550 .....	.....do .....	.....	PP
155.5575 .....	.....do	27	PP
155.565 .....	.....do .....	.....	PP
155.5725 .....	.....do	27	PP
155.580 .....	.....do .....	.....	PP
155.5875 .....	.....do	27	PP
155.595 .....	.....do .....	.....	PP
155.6025 .....	.....do	27	PP
155.610 .....	.....do .....	.....	PP
155.6175 .....	.....do	27	PP
155.625 .....	.....do .....	.....	PP
155.6325 .....	.....do	27	PP
155.640 .....	.....do .....	.....	PP
155.6475 .....	.....do	27	PP
155.655 .....	.....do .....	.....	PP
155.6625 .....	.....do	27	PP
155.670 .....	.....do .....	.....	PP
155.6775 .....	.....do	27	PP
155.685 .....	.....do .....	.....	PP
155.6925 .....	.....do	27	PP
155.700 .....	.....do .....	.....	PP
155.7075 .....	.....do	27	PP
155.715 .....	.....do .....	.....	PX
155.7225 .....	.....do	27	PX
155.730 .....	.....do .....	.....	PP
155.7375 .....	.....do	27	PP
155.745 .....	.....do .....	.....	PX
155.7525 .....	.....do	27	PX
155.760 .....	.....do .....	.....	PX
155.7675 .....	.....do	27	PX
155.775 .....	.....do .....	.....	PX
155.7825 .....	.....do	27	PX
155.790 .....	.....do .....	.....	PP
155.7975 .....	.....do	27	PP
155.805 .....	.....do .....	.....	PX
155.8125 .....	.....do	27	PX
155.820 .....	.....do .....	.....	PX
155.8275 .....	.....do	27	PX
155.835 .....	.....do .....	.....	PX
155.8425 .....	.....do	27	PX
155.850	Mobile .....	.....	PP
155.8575 .....	.....do	27	PP
155.865	Base or mobile .....	.....	PX
155.8725 .....	.....do	27	PX
155.880 .....	.....do .....	.....	PX
155.8875 .....	.....do	27	PX
155.895 .....	.....do .....	.....	PX
155.9025 .....	.....do	27	PX

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
155.910	Mobile .....	.....	PP
155.9175 .....	.....do	27	PP
155.925	Base or mobile .....	.....	PX
155.9325 .....	.....do	27	PX
155.940 .....	.....do .....	.....	PX
155.9475 .....	.....do	27	PX
155.955 .....	.....do .....	.....	PX
155.9625 .....	.....do	27	PX
155.970	Mobile .....	.....	PP
155.9775 .....	.....do	27	PP
155.985 .....	.....do .....	.....	PX
155.9925 .....	.....do	27	PX
156.000 .....	.....do .....	.....	PX
156.0075 .....	.....do	27	PX
156.015 .....	.....do .....	.....	PX
156.0225 .....	.....do	27	PX
156.030 .....	.....do .....	.....	PP
156.0375 .....	.....do	27	PP
156.045 .....	.....do	42	PH
156.0525 .....	.....do	27, 42	PH
156.060 .....	.....do	42	PH
156.0675 .....	.....do	27, 42	PH
156.075 .....	.....do .....	.....	PH
156.0825 .....	.....do	27	PH
156.090 .....	.....do .....	.....	PP
156.0975 .....	.....do	27	PP
156.105	Base or mobile .....	.....	PH
156.1125 .....	.....do	27	PH
156.120 .....	.....do .....	.....	PH
156.1275 .....	.....do	27	PH
156.135 .....	.....do .....	.....	PH
156.1425 .....	.....do	27	PH
156.150	Mobile .....	.....	PP
156.1575 .....	.....do	27	PP
156.165	Base or mobile	42, 43	PH
156.1725 .....	.....do	27, 42, 43	PH
156.180 .....	.....do	42, 43	PH
156.1875 .....	.....do	27, 42, 43	PH
156.195 .....	.....do	43	PH
156.2025 .....	.....do	27, 43	PH
156.210 .....	.....do .....	.....	PP
156.2175 .....	.....do	27	PP
156.225 .....	.....do	43	PH
156.2325 .....	.....do	27, 43	PH
156.240 .....	.....do	43	PH
156.2475 .....	.....do	43, 44	PH
157.450 .....	.....do	13, 45, 30	PS
158.7225 .....	.....do	44	PP
158.730 .....	.....do .....	.....	PP
158.7375 .....	.....do	27	PP
158.745	Base and mobile .....	.....	PX
158.7525 .....	.....do	27	PX
158.760 .....	.....do .....	.....	PX
158.7675 .....	.....do	27	PX
158.775 .....	.....do .....	.....	PX
158.7825 .....	.....do	27	PX
158.790	Base or mobile .....	.....	PP
158.7975 .....	.....do	27	PP
158.805	Base and mobile .....	.....	PX
158.8125 .....	.....do	27	PX
158.820 .....	.....do .....	.....	PX
158.8275 .....	.....do	27	PX
158.835 .....	.....do .....	.....	PX
158.8425 .....	.....do	27	PX
158.850	Base or mobile .....	.....	PP
158.8575 .....	.....do	27	PP
158.865	Mobile .....	.....	PX
158.8725 .....	.....do	27	PX

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
158.880 .....	.....do .....	.....	PX
158.8875 .....	.....do	27	PX
158.895 .....	.....do .....	.....	PX
158.9025 .....	.....do	27	PX
158.910 .....	.....do .....	.....	PP
158.9175 .....	.....do	27	PP
158.925 .....	.....do .....	.....	PX
158.9325 .....	.....do	27	PX
158.940 .....	.....do .....	.....	PX
158.9475 .....	.....do	27	PX
158.955 .....	.....do .....	.....	PX
158.9625 .....	.....do	27	PX
158.970 .....	.....do .....	.....	PP
158.9775 .....	.....do	27	PP
158.985 .....	.....do	43	PH
158.9925 .....	.....do	27, 43	PH
159.000 .....	.....do	43	PH
159.0075 .....	.....do	27, 43	PH
159.015 .....	.....do	43	PH
159.0225 .....	.....do	27, 43	PH
159.030 .....	.....do .....	.....	PP
159.0375 .....	.....do	27	PP
159.045 .....	.....do	43	PH
159.0525 .....	.....do	27, 43	PH
159.060 .....	.....do	43	PH
159.0675 .....	.....do	27, 43	PH
159.075 .....	.....do	43	PH
159.0825 .....	.....do	27, 43	PH
159.090	Base or mobile	.....	PP
159.0975 .....	.....do	27	PP
159.105 .....	.....do	43	PH
159.1125 .....	.....do	27, 43	PH
159.120 .....	.....do	43	PH
159.1275 .....	.....do	27, 43	PH
159.135 .....	.....do	43	PH
159.1425 .....	.....do	27, 43	PH
159.150 .....	.....do .....	.....	PP
159.1575 .....	.....do	27	PP
159.165 .....	.....do	43	PH
159.1725 .....	.....do	27, 43	PH
159.180 .....	.....do .....	.....	PH
159.1875 .....	.....do	27	PH
159.195 .....	.....do .....	.....	PH
159.2025 .....	.....do	27	PH
159.210 .....	.....do .....	.....	PP
159.2175 .....	.....do	27	PP
159.225 .....	.....do .....	.....	PO
159.2325 .....	.....do	27	PO
159.240 .....	.....do	46	PO
159.2475 .....	.....do	27, 46	PO
159.255 .....	.....do	46	PO
159.2625 .....	.....do	27, 46	PO
159.270 .....	.....do	46	PO
159.2775 .....	.....do	27, 46	PO
159.285 .....	.....do	46	PO
159.2925 .....	.....do	27, 46	PO
159.300 .....	.....do	46	PO
159.3075 .....	.....do	27, 46	PO
159.315 .....	.....do	46	PO
159.3225 .....	.....do	27, 46	PO
159.330 .....	.....do	46	PO
159.3375 .....	.....do	27, 46	PO
159.345 .....	.....do	46	PO
159.3525 .....	.....do	27, 46	PO
159.360 .....	.....do	46	PO
159.3675 .....	.....do	27, 46	PO
159.375 .....	.....do	46	PO
159.3825 .....	.....do	27, 46	PO
159.390 .....	.....do	46	PO
159.3975 .....	.....do	27, 46	PO

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
159.405 .....	.....do	46	PO
159.4125 .....	.....do	27, 46	PO
159.420 .....	.....do	46	PO
159.4275 .....	.....do	27, 46	PO
159.435 .....	.....do	46	PO
159.4425 .....	.....do	27, 46	PO
159.450 .....	.....do .....	.....	PO
159.4575 .....	.....do	27	PO
159.465 .....	.....do .....	.....	PO
159.4725 .....	.....do	27	PO
163.250 .....	.....do	13, 30	PS
166.250 .....	.....do	47	PF
169 to 172	Mobile	48 .....	.....
170.150	Base or mobile	47	PF
170.425 .....	.....do	9, 49, 50 ..	PO
170.475 .....	.....do	9, 49, 51 ..	PO
170.575 .....	.....do	9, 49, 50 ..	PO
171.425 .....	.....do	9, 49, 51 ..	PO
171.475 .....	.....do	9, 50, 52 ..	PO
171.575 .....	.....do	9, 49, 51 ..	PO
172.225 .....	.....do	9, 49, 50 ..	PO
172.275 .....	.....do	9, 51, 52 ..	PO
172.375 .....	.....do	9, 49, 50 ..	PO
173.075 .....	.....do	53	PP
173.20375	Fixed or mobile	33, 34, 35, 36.	PX
173.210 .....	.....do	34, 35, 36, 54.	PX
173.2375 .....	.....do	32, 33, 34, 35.	PX
173.2625 .....	.....do	32, 33, 34, 35.	PX
173.2875 .....	.....do	32, 33, 34, 35.	PX
173.3125 .....	.....do	32, 33, 34, 35.	PX
173.3375 .....	.....do	32, 33, 34, 35.	PX
173.3625 .....	.....do	32, 33, 34, 35.	PX
173.390 .....	.....do	34, 35, 36, 54.	PX
173.39625 .....	.....do	33, 34, 35, 36.	PX
220 to 222	Base and mobile.	55 .....	.....
220.8025	Base	55	PP, PS
220.8075 .....	.....do	55	PP, PS
220.8125 .....	.....do	55	PP, PS
220.8175 .....	.....do	55	PP, PS
220.8225 .....	.....do	55	PP, PS
220.8275 .....	.....do	55	PP, PS
220.8325 .....	.....do	55	PP, PS
220.8375 .....	.....do	55	PP, PS
220.8425 .....	.....do	55	PP, PS
220.8475 .....	.....do	55	PP, PS
220.9025 .....	.....do	55	PM
220.9075 .....	.....do	55	PM
220.9125 .....	.....do	55	PM
220.9175 .....	.....do	55	PM
220.9225 .....	.....do	55	PM
221.8025	Mobile	55	PP, PS
221.8075 .....	.....do	55	PP, PS
221.8125 .....	.....do	55	PP, PS
221.8175 .....	.....do	55	PP, PS
221.8225 .....	.....do	55	PP, PS
221.8275do	55	PP, PS
221.8325do	55	PP, PS
221.8375do	55	PP, PS
221.8425do	55	PP, PS

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PUBLIC SAFETY POOL FREQUENCY TABLE—
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Frequency or band	Class of station(s)	Limitations	Coordinating
221.8475do	55	PP, PS
221.9025 .....	.....do	55	PM
221.9075 .....	.....do	55	PM
221.9125 .....	.....do	55	PM
221.9175 .....	.....do	55	PM
221.9225 .....	.....do	55	PM
450 to 470	Fixed, base, or mobile.	26, 56	
453.0125	Mobile	57	PX
453.025	Central control, fixed base, or mobile.	58, 59, 60, 61, 62.	PX, PS
453.03125	Base or mobile	44, 59, 60, 61, 62.	PM, PS
453.0375 .....	.....do	27, 59, 60, 61, 62.	PX
453.04375 .....	.....do	44, 59, 60, 61, 62.	PM
453.050 .....	.....do .....	.....	PX
453.05625 .....	.....do	44	PX
453.0625 .....	.....do	27	PX
453.06875 .....	.....do	44	PX
453.075	Central control, fixed, base, or mobile.	58, 59, 60, 61, 62.	PX, PS
453.08125	Base or mobile	44, 59, 60, 61, 62.	PM
453.0875 .....	.....do	27, 59, 60, 61, 62.	PX
453.09375 .....	.....do	44, 59, 60, 61, 62.	PM
453.100 .....	.....do .....	.....	PX
453.10625 .....	.....do	44	PX
453.1125 .....	.....do	27	PX
453.11875 .....	.....do	44	PX
453.125	Central control, fixed, base, or mobile.	58, 59, 60, 61, 62.	PX, PS
453.13125	Base or mobile	44, 59, 60, 61, 62.	PM
453.1375 .....	.....do	27, 59, 60, 61, 62.	PX
453.14375 .....	.....do	44, 59, 60, 61, 62.	PM
453.150 .....	.....do .....	.....	PX
453.15625 .....	.....do	44	PX
453.1625 .....	.....do	27	PX
453.16875 .....	.....do	44	PX
453.175	Central control, fixed, base, or mobile.	58, 59, 60, 61, 62.	PX, PS
453.18125	Base or mobile	44, 59, 60, 61, 62.	PM
453.1875 .....	.....do	27, 59, 60, 61, 62.	PX
453.19375 .....	.....do	44, 59, 60, 61, 62.	PM
453.200 .....	.....do .....	.....	PX
453.20625 .....	.....do	44	PX
453.2125 .....	.....do	27	PX
453.21875 .....	.....do	44	PX
453.225 .....	.....do .....	.....	PX
453.23125 .....	.....do	44	PX
453.2375 .....	.....do	27	PX
453.24375 .....	.....do	44	PX
453.250 .....	.....do .....	.....	PX
453.25625 .....	.....do	44	PX
453.2625 .....	.....do	27	PX
453.26875 .....	.....do	44	PX
453.275 .....	.....do .....	.....	PX

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
453.28125 .....	.....do	44	PX
453.2875 .....	.....do	27	PX
453.29375 .....	.....do	44	PX
453.300 .....	.....do .....	.....	PX
453.30625 .....	.....do	44	PX
453.3125 .....	.....do	27	PX
453.31875 .....	.....do	44	PX
453.325 .....	.....do .....	.....	PX
453.33125 .....	.....do	44	PX
453.3375 .....	.....do	27	PX
453.34375 .....	.....do	44	PX
453.350 .....	.....do .....	.....	PX
453.35625 .....	.....do	44	PX
453.3625 .....	.....do	27	PX
453.36875 .....	.....do	44	PX
453.375 .....	.....do .....	.....	PX
453.38125 .....	.....do	44	PX
453.3875 .....	.....do	27	PX
453.39375 .....	.....do	44	PX
453.400 .....	.....do .....	.....	PX
453.40625 .....	.....do	44	PX
453.4125 .....	.....do	27	PX
453.41875 .....	.....do	44	PX
453.425 .....	.....do .....	.....	PX
453.43125 .....	.....do	44	PX
453.4375 .....	.....do	27	PX
453.44375 .....	.....do	44	PX
453.450 .....	.....do .....	.....	PX
453.45625 .....	.....do	44	PX
453.4625 .....	.....do	27	PX
453.46875 .....	.....do	44	PX
453.475 .....	.....do .....	.....	PX
453.48125 .....	.....do	44	PX
453.4875 .....	.....do	27	PX
453.49375 .....	.....do	44	PX
453.500 .....	.....do .....	.....	PX
453.50625 .....	.....do	44	PX
453.5125 .....	.....do	27	PX
453.51875 .....	.....do	44	PX
453.525 .....	.....do .....	.....	PX
453.53125 .....	.....do	44	PX
453.5375 .....	.....do	27	PX
453.54375 .....	.....do	44	PX
453.550 .....	.....do .....	.....	PX
453.55625 .....	.....do	44	PX
453.5625 .....	.....do	27	PX
453.56875 .....	.....do	44	PX
453.575 .....	.....do .....	.....	PX
453.58125 .....	.....do	44	PX
453.5875 .....	.....do	27	PX
453.59375 .....	.....do	44	PX
453.600 .....	.....do .....	.....	PX
453.60625 .....	.....do	44	PX
453.6125 .....	.....do	27	PX
453.61875 .....	.....do	44	PX
453.625 .....	.....do .....	.....	PX
453.63125 .....	.....do	44	PX
453.6375 .....	.....do	27	PX
453.64375 .....	.....do	44	PX
453.650 .....	.....do .....	.....	PX
453.65625 .....	.....do	44	PX
453.6625 .....	.....do	27	PX
453.66875 .....	.....do	44	PX
453.675 .....	.....do .....	.....	PX
453.68125 .....	.....do	44	PX
453.6875 .....	.....do	27	PX
453.69375 .....	.....do	44	PX
453.700 .....	.....do .....	.....	PX
453.70625 .....	.....do	44	PX
453.7125 .....	.....do	27	PX

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
453.71875 .....	.....do	44	PX
453.725 .....	.....do .....	.....	PX
453.73125 .....	.....do	44	PX
453.7375 .....	.....do	27	PX
453.74375 .....	.....do	44	PX
453.750 .....	.....do .....	.....	PX
453.75625 .....	.....do	44	PX
453.7625 .....	.....do	27	PX
453.76875 .....	.....do	44	PX
453.775 .....	.....do .....	.....	PX
453.78125 .....	.....do	44	PX
453.7875 .....	.....do	27	PX
453.79375 .....	.....do	44	PX
453.800 .....	.....do .....	.....	PX
453.80625 .....	.....do	44	PX
453.8125 .....	.....do	27	PX
453.81875 .....	.....do	44	PX
453.825 .....	.....do .....	.....	PX
453.83125 .....	.....do	44	PX
453.8375 .....	.....do	27	PX
453.84375 .....	.....do	44	PX
453.850 .....	.....do .....	.....	PX
453.85625 .....	.....do	44	PX
453.8625 .....	.....do	27	PX
453.86875 .....	.....do	44	PX
453.875 .....	.....do .....	.....	PX
453.88125 .....	.....do	44	PX
453.8875 .....	.....do	27	PX
453.89375 .....	.....do	44	PX
453.900 .....	.....do .....	.....	PX
453.90625 .....	.....do	44	PX
453.9125 .....	.....do	27	PX
453.91875 .....	.....do	44	PX
453.925 .....	.....do .....	.....	PX
453.93125 .....	.....do	44	PX
453.9375 .....	.....do	27	PX
453.94375 .....	.....do	44	PX
453.950 .....	.....do .....	.....	PX
453.95625 .....	.....do	44	PX
453.9625 .....	.....do	27	PX
453.96875 .....	.....do	44	PX
453.975 .....	.....do .....	.....	PX
453.98125 .....	.....do	44	PX
453.9875 .....	.....do	27	PX
453.99375 .....	.....do	44	PX
458.0125	Mobile	57	PS
458.025	Radio call boxes, fixed, or mobile.	58, 59, 61, 62, 63.	PX
458.03125	Mobile	44, 59, 61, 62.	PM
458.0375 .....	.....do	27, 59, 61, 62.	PX
458.04375 .....	.....do	44, 59, 61, 62.	PM
458.050 .....	.....do .....	.....	PX
458.05625 .....	.....do	44	PX
458.0625 .....	.....do	27	PX
458.06875 .....	.....do	44	PX
458.075	Radio call boxes, fixed, or mobile.	58, 59, 61, 62, 63.	PX
458.08125	Mobile	44, 59, 61, 62.	PM
458.0875 .....	.....do	27, 59, 61, 62.	PX
458.09375 .....	.....do	44, 59, 61, 62.	PM
458.100 .....	.....do .....	.....	PX
458.10625 .....	.....do	44	PX

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
458.1125 .....	.....do	27	PX
458.11875 .....	.....do	44	PX
458.125	Radio call boxes, fixed, or mobile.	58, 59, 61, 62, 63.	PX
458.13125	Mobile	44, 59, 61, 62.	PM
458.1375 .....	.....do	27, 59, 61, 62.	PX
458.14375 .....	.....do	44, 59, 61, 62.	PM
458.150 .....	.....do .....	.....	PX
458.15625 .....	.....do	44	PX
458.1625 .....	.....do	27	PX
458.16875 .....	.....do	44	PX
458.175	Radio call boxes, fixed, or mobile.	58, 59, 61, 62, 63.	PX
458.18125	Mobile	44, 59, 61, 62.	PM
458.1875 .....	.....do	27, 59, 61, 62.	PX
458.19375 .....	.....do	44, 59, 61, 62.	PM
458.200 .....	.....do .....	.....	PX
458.20625 .....	.....do	44	PX
458.2125 .....	.....do	27	PX
458.21875 .....	.....do	44	PX
458.225 .....	.....do .....	.....	PX
458.23125 .....	.....do	44	PX
458.2375 .....	.....do	27	PX
458.24375 .....	.....do	44	PX
458.250 .....	.....do .....	.....	PX
458.25625 .....	.....do	44	PX
458.2625 .....	.....do	27	PX
458.26875 .....	.....do	44	PX
458.275 .....	.....do .....	.....	PX
458.28125 .....	.....do	44	PX
458.2875 .....	.....do	27	PX
458.29375 .....	.....do	44	PX
458.300 .....	.....do .....	.....	PX
458.30625 .....	.....do	44	PX
458.3125 .....	.....do	27	PX
458.31875 .....	.....do	44	PX
458.325 .....	.....do .....	.....	PX
458.33125 .....	.....do	44	PX
458.3375 .....	.....do	27	PX
458.34375 .....	.....do	44	PX
458.350 .....	.....do .....	.....	PX
458.35625 .....	.....do	44	PX
458.3625 .....	.....do	27	PX
458.36875 .....	.....do	44	PX
458.375 .....	.....do .....	.....	PX
458.38125 .....	.....do	44	PX
458.3875 .....	.....do	27	PX
458.39375 .....	.....do	44	PX
458.400 .....	.....do .....	.....	PX
458.40625 .....	.....do	44	PX
458.4125 .....	.....do	27	PX
458.41875 .....	.....do	44	PX
458.425 .....	.....do .....	.....	PX
458.43125 .....	.....do	44	PX
458.4375 .....	.....do	27	PX
458.44375 .....	.....do	44	PX
458.450 .....	.....do .....	.....	PX
458.45625do	44	PX
458.4625do	27	PX
458.46875do	44	PX
458.475do	PX
458.48125do	44	PX

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PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
458.4875 .....	.....do	27	PX
458.49375 .....	.....do	44	PX
458.500 .....	.....do	27	PX
458.50625 .....	.....do	44	PX
458.5125 .....	.....do	27	PX
458.51875 .....	.....do	44	PX
458.525 .....	.....do	27	PX
458.53125 .....	.....do	44	PX
458.5375 .....	.....do	27	PX
458.54375 .....	.....do	44	PX
458.550 .....	.....do	27	PX
458.55625 .....	.....do	44	PX
458.5625 .....	.....do	27	PX
458.56875 .....	.....do	44	PX
458.575 .....	.....do	27	PX
458.58125 .....	.....do	44	PX
458.5875 .....	.....do	27	PX
458.59375 .....	.....do	44	PX
458.600 .....	.....do	27	PX
458.60625 .....	.....do	44	PX
458.6125 .....	.....do	27	PX
458.61875 .....	.....do	44	PX
458.625 .....	.....do	27	PX
458.63125 .....	.....do	44	PX
458.6375 .....	.....do	27	PX
458.64375 .....	.....do	44	PX
458.650 .....	.....do	27	PX
458.65625 .....	.....do	44	PX
458.6625 .....	.....do	27	PX
458.66875 .....	.....do	44	PX
458.675 .....	.....do	27	PX
458.68125 .....	.....do	44	PX
458.6875 .....	.....do	27	PX
458.69375 .....	.....do	44	PX
458.700 .....	.....do	27	PX
458.70625 .....	.....do	44	PX
458.7125 .....	.....do	27	PX
458.71875 .....	.....do	44	PX
458.725 .....	.....do	27	PX
458.73125 .....	.....do	44	PX
458.7375 .....	.....do	27	PX
458.74375 .....	.....do	44	PX
458.750 .....	.....do	27	PX
458.75625 .....	.....do	44	PX
458.7625 .....	.....do	27	PX
458.76875 .....	.....do	44	PX
458.775 .....	.....do	27	PX
458.78125 .....	.....do	44	PX
458.7875 .....	.....do	27	PX
458.79375 .....	.....do	44	PX
458.800 .....	.....do	27	PX
458.80625 .....	.....do	44	PX
458.8125 .....	.....do	27	PX
458.81875 .....	.....do	44	PX
458.825 .....	.....do	27	PX
458.83125 .....	.....do	44	PX
458.8375 .....	.....do	27	PX
458.84375 .....	.....do	44	PX
458.850 .....	.....do	27	PX
458.85625 .....	.....do	44	PX
458.8625 .....	.....do	27	PX
458.86875 .....	.....do	44	PX
458.875 .....	.....do	27	PX
458.88125 .....	.....do	44	PX
458.8875 .....	.....do	27	PX
458.89375 .....	.....do	44	PX
458.900 .....	.....do	27	PX
458.90625 .....	.....do	44	PX
458.9125 .....	.....do	27	PX
458.91875 .....	.....do	44	PX

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
458.925 .....	.....do	27	PX
458.93125 .....	.....do	44	PX
458.9375 .....	.....do	27	PX
458.94375 .....	.....do	44	PX
458.950 .....	.....do	27	PX
458.95625 .....	.....do	44	PX
458.9625 .....	.....do	27	PX
458.96875 .....	.....do	44	PX
458.975 .....	.....do	27	PX
458.98125 .....	.....do	44	PX
458.9875 .....	.....do	27	PX
458.99375 .....	.....do	44	PX
460.0125 .....	.....do	27, 64	PP
460.01875	Base or mobile	44	PP
460.025 .....	.....do	27	PP
460.03125 .....	.....do	44	PP
460.0375 .....	.....do	27	PP
460.04375 .....	.....do	44	PP
460.050 .....	.....do	27	PP
460.05625 .....	.....do	44	PP
460.0625 .....	.....do	27	PP
460.06875 .....	.....do	44	PP
460.075 .....	.....do	27	PP
460.08125 .....	.....do	44	PP
460.0875 .....	.....do	27	PP
460.09375 .....	.....do	44	PP
460.100 .....	.....do	27	PP
460.10625 .....	.....do	44	PP
460.1125 .....	.....do	27	PP
460.11875 .....	.....do	44	PP
460.125 .....	.....do	27	PP
460.13125 .....	.....do	44	PP
460.1375 .....	.....do	27	PP
460.14375 .....	.....do	44	PP
460.150 .....	.....do	27	PP
460.15625 .....	.....do	44	PP
460.1625 .....	.....do	27	PP
460.16875 .....	.....do	44	PP
460.175 .....	.....do	27	PP
460.18125 .....	.....do	44	PP
460.1875 .....	.....do	27	PP
460.19375 .....	.....do	44	PP
460.200 .....	.....do	27	PP
460.20625 .....	.....do	44	PP
460.2125 .....	.....do	27	PP
460.21875 .....	.....do	44	PP
460.225 .....	.....do	27	PP
460.23125 .....	.....do	44	PP
460.2375 .....	.....do	27	PP
460.24375 .....	.....do	44	PP
460.250 .....	.....do	27	PP
460.25625 .....	.....do	44	PP
460.2625 .....	.....do	27	PP
460.26875 .....	.....do	44	PP
460.275 .....	.....do	27	PP
460.28125 .....	.....do	44	PP
460.2875 .....	.....do	27	PP
460.29375 .....	.....do	44	PP
460.300 .....	.....do	27	PP
460.30625 .....	.....do	44	PP
460.3125 .....	.....do	27	PP
460.31875 .....	.....do	44	PP
460.325 .....	.....do	27	PP
460.33125 .....	.....do	44	PP
460.3375 .....	.....do	27	PP
460.34375 .....	.....do	44	PP
460.350 .....	.....do	27	PP
460.35625 .....	.....do	44	PP
460.3625 .....	.....do	27	PP
460.36875 .....	.....do	44	PP

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
460.375 .....	.....do .....	.....	PP
460.38125 .....	.....do	44	PP
460.3875 .....	.....do	27	PP
460.39375 .....	.....do	44	PP
460.400 .....	.....do .....	.....	PP
460.40625 .....	.....do	44	PP
460.4125 .....	.....do	27	PP
460.41875 .....	.....do	44	PP
460.425 .....	.....do .....	.....	PP
460.43125 .....	.....do	44	PP
460.4375 .....	.....do	27	PP
460.44375 .....	.....do	44	PP
460.450 .....	.....do .....	.....	PP
460.45625 .....	.....do	44	PP
460.4625 .....	.....do	27	PP
460.46875 .....	.....do	44	PP
460.475 .....	.....do .....	.....	PP
460.48125 .....	.....do	44	PP
460.4875 .....	.....do	27	PP
460.49375 .....	.....do	44	PP
460.500 .....	.....do .....	.....	PP
460.50625 .....	.....do	44	PP
460.5125 .....	.....do	27	PP
460.51875 .....	.....do	44	PP
460.525 .....	.....do .....	.....	PP, PF, PM
460.53125 .....	.....do	44	PP, PF, PM
460.5375 .....	.....do	27	PP, PF, PM
460.54375 .....	.....do	44	PP, PF, PM
460.550 .....	.....do .....	.....	PP, PF, PM
460.55625 .....	.....do	44	PP, PF, PM
460.5625 .....	.....do	27	PP, PF, PM
460.56875 .....	.....do	44	PP, PF, PM
460.575 .....	.....do .....	.....	PF
460.58125 .....	.....do	44	PF
460.5875 .....	.....do	27	PF
460.59375 .....	.....do	44	PF
460.600 .....	.....do .....	.....	PF
460.60625 .....	.....do	44	PF
460.6125 .....	.....do	27	PF
460.61875 .....	.....do	44	PF
460.625 .....	.....do .....	.....	PF
460.63125 .....	.....do	44	PF
460.6375 .....	.....do	27	PF
460.64375 .....	.....do	44	PF
462.9375	Mobile	57	PS
462.950	Base or mobile	38, 65	PM
462.95625 .....	.....do	38, 44, 65	PM
462.9625 .....	.....do	27, 38, 65	PM
462.96875 .....	.....do	38, 44, 65	PM
462.975 .....	.....do	38, 65	PM
462.98125 .....	.....do	38, 44, 65	PM
462.9875 .....	.....do	27, 38, 65	PM
462.99375 .....	.....do	38, 44, 65	PM
463.000 .....	.....do	59, 66, 67	PM
463.00625 .....	.....do	44, 59, 66, 67	PM
463.0125 .....	.....do	27, 59, 66, 67	PM
463.01875 .....	.....do	44, 59, 66, 67	PM
463.025 .....	.....do	59, 66, 67	PM
463.03125 .....	.....do	44, 59, 66, 67	PM

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
463.0375 .....	.....do	27, 59, 66, 67	PM
463.04375 .....	.....do	44, 59, 66, 67	PM
463.050 .....	.....do	59, 66, 67	PM
463.05625 .....	.....do	44, 59, 66, 67	PM
463.0625 .....	.....do	27, 59, 66, 67	PM
463.06875 .....	.....do	44, 59, 66, 67	PM
463.075 .....	.....do	59, 66, 76	PM
463.08125 .....	.....do	44, 59, 66, 76	PM
463.0875 .....	.....do	27, 59, 66, 76	PM
463.09375 .....	.....do	44, 59, 66, 76	PM
463.100 .....	.....do	59, 66, 76	PM
463.10625 .....	.....do	44, 59, 66, 76	PM
463.1125 .....	.....do	27, 59, 66, 76	PM
463.11875 .....	.....do	44, 59, 66, 76	PM
463.125 .....	.....do	59, 66, 76	PM
463.13125 .....	.....do	44, 59, 66, 76	PM
463.1375 .....	.....do	27, 59, 66, 76	PM
463.14375 .....	.....do	44, 59, 66, 76	PM
463.150 .....	.....do	59, 66, 76	PM
463.15625 .....	.....do	44, 59, 66, 76	PM
463.1625 .....	.....do	27, 59, 66, 76	PM
463.16875 .....	.....do	44, 59, 66, 76	PM
463.175 .....	.....do	59, 66, 76	PM
463.18125 .....	.....do	44, 59, 66, 76	PM
463.1875 .....	.....do	27, 59, 66, 76	PM
463.19375 .....	.....do	44, 59, 66, 76	PM
465.0125	Mobile	57	PP
465.025 .....	.....do .....	.....	PP
465.03125 .....	.....do	44	PP
465.0375 .....	.....do	27	PP
465.04375 .....	.....do	44	PP
465.050 .....	.....do .....	.....	PP
465.05625 .....	.....do	44	PP
465.0625 .....	.....do	27	PP
465.06875 .....	.....do	44	PP
465.075 .....	.....do .....	.....	PP
465.08125 .....	.....do	44	PP
465.0875 .....	.....do	27	PP
465.09375 .....	.....do	44	PP
465.100 .....	.....do .....	.....	PP
465.10625 .....	.....do	44	PP
465.1125 .....	.....do	27	PP
465.11875 .....	.....do	44	PP
465.125 .....	.....do .....	.....	PP
465.13125 .....	.....do	44	PP
465.1375do	27	PP
465.14375do	44	PP
465.150do	PP
465.15625do	44	PP
465.1625do	27	PP

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PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
465.16875 .....	.....do	44	PP
465.175 .....	.....do .....	.....	PP
465.18125 .....	.....do	44	PP
465.1875 .....	.....do	27	PP
465.19375 .....	.....do	44	PP
465.200 .....	.....do .....	.....	PP
465.20625 .....	.....do	44	PP
465.2125 .....	.....do	27	PP
465.21875 .....	.....do	44	PP
465.225 .....	.....do .....	.....	PP
465.23125 .....	.....do	44	PP
465.2375 .....	.....do	27	PP
465.24375 .....	.....do	44	PP
465.250 .....	.....do .....	.....	PP
465.25625 .....	.....do	44	PP
465.2625 .....	.....do	27	PP
465.26875 .....	.....do	44	PP
465.275 .....	.....do .....	.....	PP
465.28125 .....	.....do	44	PP
465.2875 .....	.....do	27	PP
465.29375 .....	.....do	44	PP
465.300 .....	.....do .....	.....	PP
465.30625 .....	.....do	44	PP
465.3125 .....	.....do	27	PP
465.31875 .....	.....do	44	PP
465.325 .....	.....do .....	.....	PP
465.33125 .....	.....do	44	PP
465.3375 .....	.....do	27	PP
465.34375 .....	.....do	44	PP
465.350 .....	.....do .....	.....	PP
465.35625 .....	.....do	44	PP
465.3625 .....	.....do	27	PP
465.36875 .....	.....do	44	PP
465.375 .....	.....do .....	.....	PP
465.38125 .....	.....do	44	PP
465.3875 .....	.....do	27	PP
465.39375 .....	.....do	44	PP
465.400 .....	.....do .....	.....	PP
465.40625 .....	.....do	44	PP
465.4125 .....	.....do	27	PP
465.41875 .....	.....do	44	PP
465.425 .....	.....do .....	.....	PP
465.43125 .....	.....do	44	PP
465.4375 .....	.....do	27	PP
465.44375 .....	.....do	44	PP
465.450 .....	.....do .....	.....	PP
465.45625 .....	.....do	44	PP
465.4625 .....	.....do	27	PP
465.46875 .....	.....do	44	PP
465.475 .....	.....do .....	.....	PP
465.48125 .....	.....do	44	PP
465.4875 .....	.....do	27	PP
465.49375 .....	.....do	44	PP
465.500 .....	.....do .....	.....	PP
465.50625 .....	.....do	44	PP
465.5125 .....	.....do	27	PP
465.51875 .....	.....do	44	PP
465.525 .....	.....do .....	.....	PP, PF, PM
465.53125 .....	.....do	44	PP, PF, PM
465.5375 .....	.....do	27	PP, PF, PM
465.54375 .....	.....do	44	PP, PF, PM
465.550	Base or mobile	.....	PP, PF, PM
465.55625 .....	.....do	44	PP, PF, PM
465.5625 .....	.....do	27	PP, PF, PM

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
465.56875 .....	.....do	44	PP, PF, PM
465.575	Mobile .....	.....	PF
465.58125 .....	.....do	44	PF
465.5875 .....	.....do	27	PF
465.59375 .....	.....do	44	PF
465.600 .....	.....do .....	.....	PF
465.60625 .....	.....do	44	PF
465.6125 .....	.....do	27	PF
465.61875 .....	.....do	44	PF
465.625 .....	.....do .....	.....	PF
465.63125 .....	.....do	44	PF
465.6375 .....	.....do	27	PF
465.64375 .....	.....do	44	PF
467.9375 .....	.....do	57	PS
467.950 .....	.....do	38, 65	PM
467.95625 .....	.....do	38, 44, 65	PM
467.9625 .....	.....do	27, 38, 65	PM
467.96875 .....	.....do	38, 44, 65	PM
467.975 .....	.....do	38, 65	PM
467.98125 .....	.....do	38, 44, 65	PM
467.9875 .....	.....do	27, 38, 65	PM
467.99375 .....	.....do	38, 44, 65	PM
468.000 .....	.....do	59, 66, 67	PM
468.00625 .....	.....do	44, 59, 66, 67	PM
468.0125 .....	.....do	27, 59, 66, 67	PM
468.01875 .....	.....do	44, 59, 66, 67	PM
468.025 .....	.....do	59, 66, 67	PM
468.03125 .....	.....do	44, 59, 66, 67	PM
468.0375 .....	.....do	27, 59, 66, 67	PM
468.04375 .....	.....do	44, 59, 66, 67	PM
468.050 .....	.....do	59, 66, 67	PM
468.05625 .....	.....do	44, 59, 66, 67	PM
468.0625 .....	.....do	27, 59, 66, 67	PM
468.06875 .....	.....do	44, 59, 66, 67	PM
468.075 .....	.....do	59, 66, 67	PM
468.08125 .....	.....do	44, 59, 66, 67	PM
468.0875 .....	.....do	27, 59, 66, 67	PM
468.09375 .....	.....do	44, 59, 66, 67	PM
468.100 .....	.....do	59, 66, 67	PM
468.10625 .....	.....do	44, 59, 66, 67	PM
468.1125 .....	.....do	27, 59, 66, 67	PM
468.11875 .....	.....do	44, 59, 66, 67	PM
468.125 .....	.....do	59, 66, 67	PM
468.13125 .....	.....do	44, 59, 66, 67	PM
468.1375 .....	.....do	27, 59, 66, 67	PM
468.14375 .....	.....do	44, 59, 66, 67	PM
468.150 .....	.....do	59, 66, 67	PM
468.15625 .....	.....do	44, 59, 66, 67	PM
468.1625 .....	.....do	27, 59, 66, 67	PM

PUBLIC SAFETY POOL FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Coordinator
468.16875 .....	.....do	44, 59, 66, 76.	PM
468.175 .....	.....do	59, 66, 76	PM
468.18125 .....	.....do	44, 59, 66, 76.	PM
468.1875 .....	.....do	27, 59, 66, 76.	PM
468.19375 .....	.....do	44, 59, 66, 76.	PM
470 to 512	Base or mobile	68	PX
806 to 824	Mobile	69.	
851 to 859	Base or mobile	69.	
928 and above	Operational fixed.	70.	
929 to 930	Base only	71.	
1,427 to 1,435	Operational fixed, base, or mobile.	72.	
2,450 to 2,500	Base or mobile	73.	
10,550 to 10,680.	.....do	74.	

(d) Explanation of assignment limitations appearing in the frequency table of paragraph (c)(3) of this section:

(1) This frequency is available for use by Travelers' Information Stations in accordance with §90.242.

(2) The frequency is available for assignment only in accordance with a geographical assignment plan.

(3) Base stations operating on this frequency and rendering service to state police mobile units may be authorized to use a maximum output power in excess of the maximum indicated in §90.205 but not in excess of 7500 watts: Provided, That such operation is secondary to other stations.

(4) The use of this frequency is on a secondary basis to any Canadian station.

(5) In addition to base and mobile stations, this frequency may be assigned to fixed stations on a secondary basis to base or mobile stations. Upon a showing of need, the use of a second frequency in the band 2505–3500 kHz may be made available to governmental entities through appropriate arrangements with Federal Government agencies for restricted area use on a shared basis with maximum power output, emission, and hours of operation determined on the basis of the technical conditions involved in using the selected frequency in the particular area.

(6) Only the central governments of the fifty individual States, the District of Columbia, and the insular areas of the Commonwealth of the Northern Mariana Islands, the Commonwealth of Puerto Rico, and the unincorporated territories of American Samoa, Guam and the United States Virgin Islands are eligible to be licensed to use this spectrum, and then only for disaster communications purposes. Licensees may not use this spectrum to provide operational communications circuits. See also, §90.264.

(7) This frequency is shared with the Industrial/Business Pool.

(8) This frequency is available for assignment only in accordance with a geographical assignment plan. This frequency may be used for conservation activities on a secondary basis to any station using the frequency for forest fire prevention, detection, and suppression.

(9) This frequency is reserved primarily for assignment to state licensees. Assignments to other licensees will be made only where the frequency is required for coordinated operation with the State system to which the frequency is assigned. Any request for such assignment must be supported by a statement from the State system concerned, indicating that the assignment is necessary for coordination of activities.

(10) A licensee regularly conducting two-way communication operations on this frequency may, on a secondary basis, also transmit one-way alert-paging signals to ambulance and rescue squad personnel.

(11) The maximum output power of any transmitter authorized to operate on this frequency shall not exceed 10 watts.

(12) This frequency is available in this service only to persons eligible under the provisions of paragraph (a)(2)(v) of this section for operation of transmitters having a maximum power output of three watts using A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission. This frequency is also available in the Industrial/Business Pool on a co-equal basis with the Public Safety licensees.

(13) This frequency will be assigned only for one-way paging communications to mobile receivers. Transmissions for the purpose of activating or controlling remote objects on this frequency are not authorized.

(14) The maximum output power of any transmitter authorized to operate on this frequency, after June 1, 1956, shall not exceed two watts. Licensees holding a valid authorization as of June 1, 1956, for base or mobile station operation on this frequency, with a power in excess of two watts, may continue to be authorized for such operation without regard to this power limitation.

(15) This frequency is reserved for assignment to stations for intersystem operations only: Provided, however, That licensees holding a valid authorization to use this frequency for local base or mobile operations as of June 1, 1956, may continue to be authorized for such use.

(16) This frequency is reserved primarily for assignment to state police licensees. Assignments to other police licensees will be made only where the frequency is required for coordinated operation with the state police system to which the frequency is assigned. Any request for such assignment must be supported by a statement from the state police system concerned indicating that the assignment is necessary for coordination of police activities.

(17) In the State of Alaska only, the frequency 42.40 MHz is available for assignment on a primary basis to stations in the Common Carrier Rural Radio Service utilizing meteor burst communications. The frequency may be used by private radio stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance with part 22 of this chapter or part 90. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(18) No new licenses will be granted for one-way paging under §90.487 for use on this frequency after August 1, 1980. This frequency is available to persons eligible for station licenses under the provisions of paragraph (a)(2)(v) of

this section on a co-equal basis with one-way paging users under §90.487 prior to August 1, 1985, and on a primary basis after August 1, 1985. Only A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, G2D emissions and power not exceeding 10 watts will be authorized. Antennas having gain greater than 0 dBd will not be authorized. Transmissions shall not exceed two seconds duration.

(19) This frequency is reserved for assignment to stations in this service for intersystem operations only and these operations must be primarily base-mobile communications.

(20) In the State of Alaska only, the frequency 45.90 MHz is available for assignment on a primary basis to private land mobile radio stations utilizing meteor burst communications. The frequency may be used by common carrier stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance with part 22 of this chapter and part 90. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(21) This frequency will be assigned only in accordance with a geographical assignment plan and is reserved primarily for assignment to Highway maintenance systems operated by states. The use of this frequency by other Highway maintenance licensees will be authorized only where such use is necessary to coordinate activities with the particular state to which the frequency is assigned. Any request for such use must be supported by a statement from the state concerned.

(22) Notwithstanding the provisions of paragraph (d)(21) of this section, this frequency may be used by any licensees in the Public Safety Pool without a separate license for the purpose of operating self-powered vehicle detectors for traffic control and safety purposes, on a secondary basis, in accordance with §90.269.

(23) This frequency is reserved for assignment only to national organizations eligible for disaster relief operations under paragraph (a)(2)(vii) of this section.

(24) Assignment and use of frequencies in the band 72–76 MHz are governed by § 90.257 for operational-fixed stations and by § 90.241 for emergency call box operations. Specific frequencies are listed at § 90.257(a)(1).

(25) This frequency is available to Public Safety Pool licensees for fire call box operations on a shared basis in Industrial/Business Pool. All communications on this frequency must be conducted with persons or organizations charged with specific fire protection responsibility. All operations on this frequency are subject to the provisions of § 90.257(b).

(26) Assignment of frequencies in this band are subject to the provisions of § 90.173. Licensees as of August 18, 1995 who operate systems in the 150–170 MHz band that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(27) This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(28) This frequency is not available for assignment in this service in Puerto Rico or the Virgin Islands.

(29) This frequency is removed by 22.5 kHz from frequencies assigned to other radio services. Utilization of this frequency may result in, as well as be subject to, interference under certain operating conditions. In considering the use of this frequency, adjacent channel operations should be taken into consideration. If interference occurs, the licensee may be required to take the necessary steps to resolve the problem. See § 90.173(b).

(30) This frequency will be authorized a channel bandwidth of 25 kHz.

(31) The maximum output power of any transmitter authorized to operate on this frequency shall not exceed 100 watts. Stations authorized prior to July 15, 1992 for fixed operations will be permitted to continue such operations, but at a maximum transmitter power output of 10 watts.

(32) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mo-

bile stations. The height of the antenna system may not exceed 15.24 meters (50 ft.) above ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(33) For FM transmitters, the sum of the highest modulating frequency in Hertz and the amount of the frequency deviation or swing in Hertz may not exceed 2800 Hz and the maximum deviation may not exceed 2.5 kHz. For AM transmitters, the highest modulation frequency may not exceed 2000 Hz. The carrier frequency must be maintained within .0005 percent of the center of the frequency band, and the authorized bandwidth may not exceed 6 kHz.

(34) This frequency is available on a shared basis with the Industrial/Business Pool for remote control and telemetry operations.

(35) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 dB. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160 degrees of azimuth.

(36) The maximum power output of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobile stations. A1A, A1D, A2B, A2D, F1B, F1D, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(37) Use of this frequency is limited to stations located at least 120.7 km (75 miles) from the center of any urbanized area of 200,000 or more population (U.S. Census of Population 1970). Operation is on a secondary basis to licensees of the Industrial/Business Pool.

(38) A licensee regularly conducting two-way communications operations on this frequency may, on a secondary basis, also transmit one-way alert-paging signals to ambulance and rescue squad personnel.

(39) In addition to other authorized uses, the use of F1B, F1D, F2B or F2D emission is permitted on this frequency for the operation of biomedical telemetry systems except in the following geographic locations:

(i) New York, N.Y.-Northeastern New Jersey; Los Angeles-Long Beach, Calif.; Chicago, Ill.-Northwestern Indiana; Philadelphia, Pa.-N.J.; Detroit, Mich.; San Francisco-Oakland, Calif.; Boston,

Mass.; Washington, D.C.-Md.-Va.; Cleveland, Ohio; St. Louis, Mo.-Ill.; Pittsburgh, Pa.; Minneapolis-St. Paul, Minn.; Houston, Tex.; Baltimore, Md.; Dallas, Tex.; Milwaukee, Wis.; Seattle-Everett, Wash.; Miami, Fla.; San Diego, Calif.; Atlanta, Ga.; Cincinnati, Ohio-Ky.; Kansas City, Mo.-Kans.; Buffalo, N.Y.; Denver, Colo.; San Jose, Calif.; New Orleans, La.; Phoenix, Ariz.; Portland, Oreg.-Wash.; Indianapolis, Ind.; Providence-Pawtucket-Warwick, R.I.-Mass.; Columbus, Ohio; San Antonio, Tex.; Louisville, Ky.-Ind.; Dayton, Ohio; Fort Worth, Tex.; Norfolk-Portsmouth, Va.; Memphis, Tenn.-Miss.; Sacramento, Calif.; Fort Lauderdale-Hollywood, Fla.; Rochester, N.Y.; Tampa-St. Petersburg, Fla;

(ii) The continuous carrier mode of operation may be used for telemetry transmissions on this frequency for periods up to two-minutes duration; following which there must be a break in the carrier for at least a one-minute period; and

(iii) Geographical coordinates for the above-listed urbanized areas may be found at Table 1 of § 90.635.

(40) This frequency may be designated by common consent as an intersystem mutual assistance frequency under an area-wide medical communications plan.

(41) This frequency is available nationwide for use in police emergency communications networks operated under statewide law enforcement emergency communications plans.

(42) This frequency may not be assigned within 161 km (100 miles) of New Orleans (coordinates 29°56'53" N and 90°04'10" W).

(43) This frequency is reserved for assignment for use in highway maintenance systems operated by licenses other than States.

(44) This frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(45) Operations on this frequency are limited to 30 watts transmitter output power.

(46) This frequency is shared with the Industrial/Business Pool in Puerto Rico and the Virgin Islands.

(47) This frequency may be assigned to stations in the Public Safety Pool,

only at points within 240 km. (150 mi.) of New York, N.Y.

(48) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of § 90.265.

(49) This frequency will be assigned only to licensees directly responsible for the prevention, detection, and suppression of forest fires, on a secondary basis to any U.S. Government station.

(50) This frequency will be assigned for use only in areas west of the Mississippi River.

(51) This frequency will be assigned for use only in areas east of the Mississippi.

(52) In addition to agencies responsible for forest fire prevention, detection, and suppression, this frequency may be assigned to conservation agencies which do not have forest fire responsibilities on a secondary basis to any U.S. Government stations, *Provided*, That such assignment is necessary to permit mobile relay operation by such agencies.

(53) This frequency is subject to the provisions of paragraph (e)(6) of this section.

(54) For FM transmitters, the sum of the highest modulating frequency in hertz and the amount of the frequency deviation or swing in hertz may not exceed 1700 Hz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters, the highest modulating frequency may not exceed 1200 Hz. The carrier frequency must be maintained within .0005 percent of the center of the frequency band, and the authorized bandwidth may not exceed 3 kHz.

(55) Subpart T of this part contains rules for assignment of frequencies in the 220-222 MHz band.

(56) The frequencies available for use at fixed stations in this band and the requirements for assignment are set forth in § 90.261. Operation on these frequencies is secondary to stations in the Industrial/Business Pool where they are assigned for land mobile operations.

(57) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

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(58) This frequency is available for systems first licensed prior to March 31, 1980, for radio call box communications related to safety on highways in accordance with the provisions of § 90.241(c). No new systems will be authorized of this nature, but systems authorized prior to March 31, 1980 may be modified, expanded, and renewed.

(59) The continuous carrier mode of operation may be used for telemetry transmission on this frequency.

(60) Paging licensees as of March 20, 1991, may continue to operate on a primary basis until January 14, 1998.

(61) Highway radio call box operations first licensed prior to March 31, 1980 on this frequency may continue to operate in accordance with paragraph (d)(58) of this section.

(62) This frequency is also authorized for use for operations in biomedical telemetry stations. F1B, F1D, F2B, F2D, F3E, G1B, G1D, G2B, G2D, and G3E emissions may be authorized for biomedical transmissions.

(63) Available for medical services mobile operations in the Public Safety Pool in accordance with paragraph (d)(61) of this section.

(64) Use of this frequency is on a secondary basis and subject to the provisions of § 90.267 (a)(3), (a)(4), (a)(5), and (a)(7).

(65) This frequency is primarily authorized for use in the dispatch of medical care vehicles and personnel for the rendition or delivery of medical services. This frequency may also be assigned for intra-system and inter-system mutual assistance purposes. For uniformity in usage these frequency pairs may be referred to by channel name as follows:

Frequencies base and mobile (megahertz)	Mobile only (MHz)	Channel name
462.950	467.950	MED-9
462.95625	467.95625	MED-91
462.9625	467.9625	MED-92
462.96875	467.96875	MED-93
462.975	467.975	MED-10
462.98125	467.98125	MED-101
462.9875	467.9875	MED-102
462.99375	467.99375	MED-103

(66) For applications for new radio systems, the thirty-two frequency pairs listed in paragraph (d)(66)(i) of this section will be assigned in a block for shared operation under

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§ 90.20(a)(1)(iii) or § 90.20(a)(2)(xiii) subject to the following:

(i) For uniformity in usage, these frequency pairs may be referred to by channel name as follows:

Frequencies base and mobile (megahertz)	Mobile only (MHz)	Channel name
463.000	468.000	MED-1
463.00625	468.00625	MED-11
463.0125	468.0125	MED-12
463.01875	468.01875	MED-13
463.025	468.025	MED-2
463.03125	468.03125	MED-21
463.0375	468.0375	MED-22
463.04375	468.04375	MED-23
463.050	468.050	MED-3
463.05625	468.05625	MED-31
463.0625	468.0625	MED-32
463.06875	468.06875	MED-33
463.075	468.075	MED-4
463.08125	468.08125	MED-41
463.0875	468.0875	MED-42
463.09375	468.09375	MED-43
463.100	468.100	MED-5
463.10625	468.10625	MED-51
463.1125	468.1125	MED-52
463.11875	468.11875	MED-53
463.125	468.125	MED-6
463.13125	468.13125	MED-61
463.1375	468.1375	MED-62
463.14375	468.14375	MED-63
463.150	468.150	MED-7
463.15625	468.15625	MED-71
463.1625	468.1625	MED-72
463.16875	468.16875	MED-73
463.175	468.175	MED-8
463.18125	468.18125	MED-81
463.1875	468.1875	MED-82
463.19375	468.19375	MED-83

(ii) Except as provided in paragraphs (d)(66) (iii) and (iv) of this section, mobile or portable stations must employ equipment that is both wired and equipped to transmit/receive, respectively, on each of these MED frequency pairs with transmitters operated on the 468 MHz frequencies.

(iii) Portable (hand-held) units operated with a maximum output power of 2.5 watts are exempted from the multi-channel equipment requirements specified in paragraph (d)(66)(ii) of this section.

(iv) Stations located in areas above line A, as defined in § 90.7 will be required to meet multi-channel equipment requirements only for those frequencies up to the number specified in paragraph (d)(66)(ii) of this section that have been assigned and coordinated with Canada in accordance with the applicable U.S.-Canada agreement.

(67) This frequency is authorized for use only for operations in biomedical telemetry stations. F1B, F1D, F2B,

F2D, F3E, G1B, G1D, G2B, G2D and G3E emissions may be authorized. Entities eligible in the Public Safety Pool may use this frequency on a secondary basis for any other permissible communications consistent with § 90.20(a)(1)(iii) or § 90.20(a)(2)(xiii).

(68) Subpart L of this part contains rules for assignment of frequencies in the 470–512 MHz band.

(69) Subpart S of this part contains rules for assignment of frequencies in the 806–824 MHz and 851–869 MHz bands.

(70) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(71) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(72) This frequency band is available to stations in this service subject to the provisions of § 90.259.

(73) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new stations or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(74) This band is available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(75) Appropriate frequencies in the band 2000–3000 kHz which are designated in part 80 of this chapter as available to Public Ship Stations for telephone communications with Public Coast Stations may be assigned on a secondary basis to fixed Stations in the Public Safety Pool for communication with Public Coast Stations only, provided such stations are located in the United States and the following conditions are met:

(i) That such fixed station is established pursuant to the eligibility provi-

sions of (§ 90.47) and that the isolated area involved is an island or other location not more than 480 km (300 statute miles) removed from the desired;

(ii) That evidence is submitted showing that an arrangement has been made with the coast station licensee for the handling of emergency communications permitted by § 80.453 of this chapter and § 90.20(a)(2)(x)(C); and

(iii) That operation of the Public Safety fixed station shall at no time conflict with any provision of part 80 of this chapter and further, that such operation in general shall conform to the practices employed by Public Ship Stations for radiotelephone communication with the same Public Coast Station.

(76) This frequency is authorized only for communications between medical facilities vehicles and personnel related to medical supervision and instruction for the treatment and transport of patients in the rendition or delivery of medical services. F1B, F1D, F2B, F2D, G1B, G1D, G2B, F3E and G3E emissions are authorized. Public Safety entities may use this frequency on a secondary basis for any other permissible communications consistent with § 90.20(a)(1)(iii) or § 90.20(a)(2)(xiii).

(e) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also § 90.253.)

(1) Substitution of frequencies available below 25 MHz may be made in accordance with the provisions of § 90.263.

(2) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. See also § 90.257.

(3) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 39.99 to 40.00 MHz and 42.00 to 42.01 MHz, are available for assignment for developmental operation subject to the provisions of subpart Q of this part.

(4) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(5) A Police licensee may use transmitters on the frequencies indicated below in connection with official police activities without specific authorization from the Commission, provided that such use shall be on a secondary basis and shall not cause harmful interference to services of other licensees operating on regularly assigned frequencies, and further provided that all such use complies with the requirements of Federal, State and local laws. The provisions of §90.429 shall not apply to transmitters authorized under this paragraph. To be eligible for operations in this manner, the transmitter must comply with all of the following requirements.

(i) In accordance with §90.203 and §2.803 of this chapter, the transmitter must be of a type which has been type accepted by the Commission.

(ii) The carrier frequency shall be within the bands listed below and must be maintained within 0.005 percent of the frequency of operation. Use on assigned channel center frequencies is not required.

30.85–30.87 MHz	31.97–32.00 MHz
30.89–30.91 MHz	33.00–33.03 MHz
30.93–30.95 MHz	33.05–33.07 MHz
30.97–30.99 MHz	33.41–34.00 MHz
31.01–31.03 MHz	37.00–37.43 MHz
31.05–31.07 MHz	37.89–38.00 MHz
31.09–31.11 MHz	39.00–40.00 MHz
31.13–31.15 MHz	42.00–42.91 MHz
31.17–31.19 MHz	44.61–45.91 MHz
31.21–31.23 MHz	45.93–45.95 MHz
31.25–31.27 MHz	45.97–45.99 MHz
31.29–31.31 MHz	46.01–46.03 MHz
31.33–31.35 MHz	46.05–46.60 MHz
31.37–31.39 MHz	47.00–47.41 MHz
31.41–31.43 MHz	150.995–151.490 MHz
31.45–31.47 MHz	153.740–154.445 MHz
31.49–31.51 MHz	154.635–155.195 MHz
31.53–31.55 MHz	155.415–156.250 MHz
31.57–31.59 MHz	158.715–159.465 MHz
31.61–31.63 MHz	453.0125–453.9875 MHz
31.65–31.67 MHz	458.0125–458.9875 MHz
31.69–31.71 MHz	460.0125–460.5125 MHz
31.73–31.75 MHz	460.5625–460.6375 MHz
31.77–31.79 MHz	462.9375–462.9875 MHz
31.81–31.83 MHz	465.0125–465.5125 MHz
31.85–31.87 MHz	465.5625–465.6375 MHz
31.89–31.91 MHz	467.9375–467.9875 MHz
31.93–31.95 MHz	

(iii) The emitted signal shall be non-voice modulation (type PO emission).

(iv) The maximum occupied bandwidth, containing 99 percent of the radiated power, shall not exceed 2.0 kHz.

(v) The transmitter output power shall not exceed a mean power of 30 mW nor shall any peak exceed 1 watt peak power, as measured into a 50 ohm resistive load. Should the transmitter be supplied with a permanently attached antenna or should the transmitter and antenna combination be contained in a sealed unit, the following standard may be used in lieu of the above: the field strength of the fundamental signal of the transmitter and antenna combination shall not exceed 0.4 V/m mean or 2.3 V/m peak when measured at a distance of 3 meters.

(vi) The transmitter shall contain positive means to limit the transmission time to no more than 10 days. In the event of a malfunction of this positive means, the transmitter signal shall cease. The use of battery life to accomplish the transmission time limitation is permissible.

(6) The frequency 173.075 MHz is available for stolen vehicle recovery systems on a shared basis with the Federal Government. Stolen vehicle recovery systems are limited to recovering stolen vehicles and are not authorized for general purpose vehicle tracking or monitoring. Mobile transmitters operating on this frequency are limited to 2.5 watts power output and base transmitters are limited 300 watts ERP. F1D and F2D emissions may be used within a maximum authorized 20 kHz bandwidth. Transmissions from mobiles shall be limited to 200 milliseconds every 10 seconds, except that when a vehicle is being tracked actively, transmissions may be increased to 200 milliseconds every second. Transmissions from base stations will be limited to a total time of 1 second every minute. Applications for base stations operating on this frequency shall require coordination with the Federal Government. Applicants shall perform an analysis for each base station located within 169 km (105 miles) of a TV channel 7 transmitter of potential interference to TV channel 7 viewers. Such stations will be authorized if the applicant has limited the interference contour to fewer than 100 residences or if the applicant:

(i) Shows that the proposed site is the only suitable location;

(ii) Develops a plan to control any interference caused to TV reception from the operations; and

(iii) Agrees to make such adjustments in the TV receivers affected as may be necessary to eliminate interference caused by its operations. The licensee must eliminate any interference caused by its operation to TV channel 7 reception within 30 days of the time it is notified in writing by the Commission. If this interference is not removed within the 30-day period, operation of the base station must be discontinued. The licensee is expected to help resolve all complaints of interference.

(f) *Limitation on number of frequencies assignable.* Normally only two frequencies or pairs of frequencies in the paired frequency mode of operation will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with the operation of mobile repeaters in accordance with §90.247 notwithstanding this limitation;

(2) The frequency 39.06 MHz may be assigned notwithstanding this limitation;

(3) Frequencies in the 25-50 MHz, 150-170 MHz, 450-512 MHz and 902-928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation;

(4) A licensee of a radio station in the Public Safety Radio Pool may operate radio units for the purpose of determining distance, direction, speed, or position by means of a radiolocation device on any frequency available for radiolocation purposes without specific authorization from the Commission, provided type accepted equipment or equipment authorized pursuant to §§90.203(b)(4) and (5) is used and all other rule requirements are satisfied; and

(5) A Police licensee may use, without special authorization from the Commission, any mobile service frequency between 40 and 952 MHz, listed

in paragraph (c)(3) of this section, for communications in connection with physical surveillance, stakeouts, raids, and other such activities. Such use shall be on a secondary basis to operations of licensees regularly authorized on the assigned frequencies. The maximum output power that may be used for such communications is 2 watts. Transmitters, operating under this provision of the rules, shall be exempted from the station identification requirements of §90.425. Use of frequencies not designated by a "PP" in the coordinator column of the frequency table in paragraph (c)(3) of this section, is conditional on the approval of the coordinator corresponding to each frequency. Spread spectrum transmitters may be operated on Public Safety Pool frequencies between 37 and 952 MHz, providing that they are type accepted by the Commission under the provisions of §2.803 of this chapter and §90.203, and meet the following conditions:

(i) Frequency hopping transmitters can be operated, with a maximum output power of 2 watts, on any Public Safety Pool frequency between 37 and 952 MHz listed in paragraph (c)(3) of this section. At least 20 hopping frequencies shall be used and the average time of occupancy on any frequency shall not be greater than $\frac{1}{10}$ second in every 2 seconds;

(ii) Use of spread spectrum transmitters under paragraph (f)(4) of this section is subject to approval by the applicable frequency coordinator of the radio services of the district in which the license and equipment are to be used; and

(iii) The use of direct sequence spread spectrum equipment is also permitted. Equipment must meet the technical standards of §15.247 of this chapter.

(6) In addition to the frequencies assigned for mobile service operation, one base station frequency above 152 MHz may be assigned as a common frequency to all licensees in a particular area to permit intersystem communication between base stations or mobile stations or both. This frequency use will not be authorized in any area where all available frequencies are required for independent systems.

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(7) A licensee may use, without a specific authorization from the Commission, transmitters on the frequencies indicated below in connection with wildlife tracking and/or telemetry and in connection with official forestry-conservation activities, provided that such use shall be on a secondary basis and shall not cause harmful interference to services of other licensees operating on regularly assigned frequencies. The provisions of § 90.203, § 90.425, and § 90.429 shall not apply to transmitters complying with this paragraph. To be eligible for operations in this manner, the transmitter must comply with all of the following requirements.

(i) The carrier frequency shall be within the bands listed below. The carrier frequency must be maintained within 0.005 percent of the frequency of operation.

Use on assigned channel center frequencies is not required.

(MHz)

31.17 to 31.19	31.85 to 31.87
31.21 to 31.23	31.89 to 31.91
31.25 to 31.27	31.93 to 31.95
31.29 to 31.31	31.97 to 31.99
31.33 to 31.35	44.63 to 44.65
31.37 to 31.39	44.67 to 44.69
31.41 to 31.43	44.71 to 44.73
31.45 to 31.47	44.75 to 44.77
31.49 to 31.51	44.79 to 44.81
31.53 to 31.55	44.83 to 44.85
31.57 to 31.59	44.87 to 44.89
31.61 to 31.63	44.91 to 44.93
31.65 to 31.67	44.95 to 44.97
31.69 to 31.71	44.99 to 45.01
31.73 to 31.75	45.03 to 45.05
31.77 to 31.79	151.145 to 151.475
31.81 to 31.83	159.225 to 159.465

(ii) The emitted signal shall be non-voice modulation (A1D, A2D, F1D, or F2D emission).

(iii) The maximum occupied bandwidth, containing 99 percent of the radiated power, shall not exceed 0.25 kHz.

(iv) The transmitter output power shall not exceed a mean power of 5 mW nor shall any peak exceed 100 mW peak power, as measured into a permanently attached antenna; or if the transmitter and antenna combination are contained in a sealed unit, the field strength of the fundamental signal of the transmitter and antenna combination shall not exceed 0.29 V/m mean or

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1.28 V/m peak when measured at a distance of 3 meters.

(v) The requirements of § 90.175 regarding frequency coordination apply.

(8) An additional frequency may be assigned for paging operations from those frequencies available under paragraph (d)(13) of this section.

(9) The frequency 155.340 MHz may be assigned as an additional frequency when it is designated as a mutual assistance frequency as provided in paragraph (d)(40) of this section.

(10) Additional frequencies may be assigned for fixed station operations.

(11) The assignment of an additional frequency or frequencies may be authorized notwithstanding this limitation for common, intra-county, intra-fire-district, or intrastate fire coordination operations. The frequency or frequencies requested must be in accordance with a frequency utilization plan, for the area involved, on file with the Commission.

§ 90.22 Paging operations.

Paging operations may be authorized in this service only on frequencies assigned under the provisions of §§ 90.20(d) (10), (13), (60), and (72). Paging operations on other frequencies authorized before August 15, 1974, may be continued only if they do not cause harmful interference to regular operations on the same frequencies. Such paging operations may be renewed indefinitely on a secondary basis to regular operations, except within 125 kilometers (75 mi.) of the following urbanized areas:

Urbanized area	North latitude	West longitude
New York, NY-Northeastern NJ	40–45–06	73–59–39
Los Angeles-Long Beach, CA	34–03–15	118–14–28
Chicago, IL	41–52–28	87–38–22
Philadelphia, PA-NJ	39–56–58	75–09–21
Detroit, MI	42–19–48	83–02–57
San Francisco-Oakland, CA	37–46–39	122–24–40
Boston, MA	42–21–24	71–03–25
Washington, DC-MD-VA	38–53–51	77–00–33
Cleveland, OH	41–29–51	81–41–50
St Louis, MO-IL	38–37–45	90–12–22
Pittsburgh, PA	40–26–19	80–00–00
Minneapolis-St Paul, MN	44–58–57	93–15–43
Houston, TX	29–45–26	95–21–37
Baltimore, MD	39–17–26	76–36–45
Dallas, TX	32–47–09	96–47–37
Milwaukee, WI	43–02–19	87–54–15
Seattle-Everett, WA	47–36–32	122–20–12
Miami, FL	25–46–37	80–11–32
San Diego, CA	32–42–53	117–09–21
Atlanta, GA	33–45–10	84–23–37
Cincinnati, OH-KY	39–06–07	84–30–35

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Urbanized area	North latitude	West longitude
Kansas City, MO-KS	39-04-56	94-35-20
Buffalo, NY	42-52-52	78-52-21
Denver, CO	39-44-58	104-59-22
San Jose, CA	37-20-16	121-53-24
Tampa-St Petersburg, FL	27-51-48	82-33-11
Phoenix, AZ	33-41-10	111-31-15

EFFECTIVE DATE NOTE: At 62 FR 18845, Apr. 17, 1997, subpart B, formerly consisting of §§90.15—90.27, was revised, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

Subpart B—Public Safety Radio Services

§90.15 Scope.

The Public Safety Radio Services include the Local Government, Police, Fire, Highway Maintenance and Forestry-Conservation Radio Services. Rules as to eligibility for licensing, frequencies available, and any special requirements as to each of these radio services are set forth in the following sections.

§90.16 Public Safety National Plan.

The Commission has established a National Plan which specifies special policies and procedures governing the Public Safety Radio Services and the Special Emergency Radio Service. The National Plan is contained in the *Report and Order* in General Docket No. 87-112. The principal spectrum resource for the National Plan is the 821-824 MHz and the 866-869 MHz bands. The National plan establishes planning regions covering all parts of the United States, Puerto Rico, and the U.S. Virgin Islands. No assignments will be made in the 821-824 MHz and 866-869 MHz bands until a regional plan for the area has been accepted by the Commission.

[53 FR 1023, Jan. 15, 1988]

§90.17 Local Government Radio Service.

(a) *Eligibility.* Any territory, possession, state, city, county, town or similar governmental entity, including a district and an authority, but not including a school district or authority or a park district or authority except as provided for in §90.242, is eligible to hold authorizations in the Local Government Radio Service to operate radio stations for transmission of communications essential to official activities of the licensee. Additionally, the following non-governmental entities are eligible to hold authorizations in the Local Government Radio Service, *provided* that their applications are accompanied by a statement from the governmental entity having legal jurisdiction over the area to be served, supporting the request:

(1) Persons or organizations charged with specific fire protection activities for commu-

nications essential to the official fire activities of the licensee; or

(2) Persons or organizations charged with specific forestry-conservation activities for communications essential to the official forestry-conservation activities of the licensee.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Local Government Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section.

LOCAL GOVERNMENT RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
530	Base (T.I.S.)	23
1610 .....	.....do	23
2726	Base or mobile	1
2000 to 10,000	Fixed, base or mobile	25
Megahertz		
37.10	Base or mobile	2
37.18 .....	.....do	2
37.26 .....	.....do	2
39.06	Mobile	2, 3
39.10	Base or mobile	2
39.18 .....	.....do	2
39.50 .....	.....do	2
39.58 .....	.....do	2
39.82 .....	.....do	2
39.90 .....	.....do	2
39.98 .....	.....do	2
45.08 .....	.....do	
45.12 .....	.....do	
45.16 .....	.....do	
45.20 .....	.....do	
45.24 .....	.....do	
45.28 .....	.....do	
45.32 .....	.....do	
45.36 .....	.....do	
45.40 .....	.....do	
45.44 .....	.....do	
45.48 .....	.....do	
45.52 .....	.....do	
45.56 .....	.....do	
45.60 .....	.....do	
45.64 .....	.....do	
46.52 .....	.....do	
46.54 .....	.....do	
46.56 .....	.....do	
46.58 .....	.....do	
72.00 to 76.00	Operational fixed	6
150 to 170	Base or mobile	29, 31
153.740	Mobile	
153.7475 .....	.....do	24
153.755 .....	.....do	
153.7625 .....	.....do	24
153.785 .....	.....do	
153.7925 .....	.....do	24
153.800 .....	.....do	
153.8075 .....	.....do	24
153.815 .....	.....do	
153.8225 .....	.....do	24
153.845 .....	.....do	
153.8525 .....	.....do	24
153.860 .....	.....do	
153.8675 .....	.....do	24
153.875 .....	.....do	
153.8825 .....	.....do	24
153.905 .....	.....do	
153.9125do	24
153.920do	
153.9275do	24
153.935do	
153.9425do	24
153.965do	
153.9725do	24

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Frequency or band	Class of station(s)	Limitations
153.980do	
153.9875do	24
153.995do	
154.0025 .....	.....do	24
154.025	Base or mobile	
154.0325 .....	.....do	24
154.040 .....	.....do	5
154.0475 .....	.....do	5, 24
154.055 .....	.....do	5
154.0625 .....	.....do	5, 24
154.085 .....	.....do	5
154.0925 .....	.....do	5, 24
154.100 .....	.....do	5
154.1075 .....	.....do	5, 24
154.115 .....	.....do	5
154.1225 .....	.....do	5, 24
154.45625	Fixed or mobile	9, 20, 21, 22
154.46375 .....	.....do	7, 19, 20, 21, 22
154.47125 .....	.....do	7, 20, 21, 22
154.47875 .....	.....do	19, 20, 21, 22
154.965	Base or mobile	
154.9725 .....	.....do	24
154.980 .....	.....do	
154.9875 .....	.....do	24
154.995 .....	.....do	
155.0025 .....	.....do	24
155.025 .....	.....do	
155.0325 .....	.....do	24
155.040 .....	.....do	
155.0475 .....	.....do	24
155.055 .....	.....do	
155.0625 .....	.....do	24
155.085 .....	.....do	
155.0925 .....	.....do	24
155.100 .....	.....do	
155.1075 .....	.....do	24
155.115 .....	.....do	
155.1225 .....	.....do	24
155.145 .....	.....do	
155.1525 .....	.....do	24
155.715 .....	.....do	
155.7225 .....	.....do	24
155.745 .....	.....do	
155.7525 .....	.....do	24
155.760 .....	.....do	
155.7675 .....	.....do	24
155.775 .....	.....do	
155.7825 .....	.....do	24
155.805 .....	.....do	
155.8125 .....	.....do	24
155.820 .....	.....do	
155.8275 .....	.....do	24
155.835 .....	.....do	
155.8425 .....	.....do	24
155.865 .....	.....do	
155.8725 .....	.....do	24
155.880 .....	.....do	
155.8875 .....	.....do	24
155.895 .....	.....do	
155.9025 .....	.....do	24
155.925 .....	.....do	
155.9325 .....	.....do	24
155.940 .....	.....do	
155.9475 .....	.....do	24
155.955 .....	.....do	
155.9625 .....	.....do	24
155.985	Mobile	
155.9925 .....	.....do	24
156.000 .....	.....do	
156.0075 .....	.....do	24
156.015 .....	.....do	
156.0225 .....	.....do	24
158.745	Base and mobile	
158.7525 .....	.....do	24
158.760 .....	.....do	
158.7675 .....	.....do	24
158.775 .....	.....do	
158.7825 .....	.....do	24
158.805 .....	.....do	

LOCAL GOVERNMENT RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
158.8125 .....	.....do	
158.820 .....	.....do	
158.8275 .....	.....do	24
158.835 .....	.....do	
158.8425 .....	.....do	24
158.865	Mobile	
158.8725 .....	.....do	24
158.880 .....	.....do	
158.8875 .....	.....do	24
158.895 .....	.....do	
158.9025 .....	.....do	24
158.925 .....	.....do	
158.9325 .....	.....do	24
158.940 .....	.....do	
158.9475 .....	.....do	24
158.955 .....	.....do	
158.9625 .....	.....do	24
169–172 .....	.....do	27
173.20375	Fixed or mobile	7, 20, 21, 22
173.2100 .....	.....do	7, 8, 21, 22
173.2375 .....	.....do	9, 20, 21, 22
173.2625 .....	.....do	9, 20, 21, 22
173.2875 .....	.....do	9, 20, 21, 22
173.3125 .....	.....do	9, 20, 21, 22
173.3375 .....	.....do	9, 20, 21, 22
173.3625 .....	.....do	9, 20, 21, 22
173.3900 .....	.....do	7, 8, 21, 22
173.39625 .....	.....do	7, 20, 21, 22
220 to 222	Base and mobile	4
450 to 470	Fixed, base, or mobile	10, 29
453.0125	Mobile	30
453.025	Central control, fixed	11
453.0375	Base or mobile	24
453.050 .....	.....do	12
453.05625 .....	.....do	12, 28
453.06250 .....	.....do	12, 24
453.06875 .....	.....do	12, 28
453.075	Central control, fixed	11
453.0875	Base or mobile	24
453.100 .....	.....do	12
453.10625 .....	.....do	12, 28
453.11250 .....	.....do	12, 24
453.11875 .....	.....do	12, 28
453.125	Central control, fixed	11
453.1375	Base or mobile	24
453.150 .....	.....do	12
453.15625 .....	.....do	12, 28
453.16250 .....	.....do	12, 24
453.16875 .....	.....do	12, 28
453.175	Central control, fixed	11
453.1875	Base or mobile	24
453.200 .....	.....do	12
453.20625 .....	.....do	12, 28
453.21250 .....	.....do	12, 24
453.21875 .....	.....do	12, 28
453.225 .....	.....do	
453.23125 .....	.....do	28
453.23750 .....	.....do	24
453.24375 .....	.....do	28
453.250 .....	.....do	12
453.25625 .....	.....do	12, 28
453.26250 .....	.....do	12, 24
453.26875 .....	.....do	12, 28
453.275 .....	.....do	
453.28125 .....	.....do	28
453.28750 .....	.....do	24
453.29375 .....	.....do	28
453.300 .....	.....do	12
453.30625do	12, 28
453.31250do	12, 24
453.31875do	12, 28
453.325do	
453.33125do	28

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LOCAL GOVERNMENT RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
453.33750	.....do	24
453.34375	.....do	28
453.350	.....do	12
453.35625	.....do	12, 28
453.36250	.....do	12, 24
453.36875	.....do	12, 28
453.375	.....do	.....
453.38125	.....do	28
453.38750	.....do	24
453.39375	.....do	28
453.400	.....do	12
453.40625	.....do	12, 28
453.41250	.....do	12, 24
453.41875	.....do	12, 28
453.425	.....do	.....
453.43125	.....do	28
453.43750	.....do	24
453.44375	.....do	28
453.450	.....do	12
453.45625	.....do	12, 28
453.46250	.....do	12, 24
453.46875	.....do	12, 28
453.475	.....do	.....
453.48125	.....do	28
453.48750	.....do	24
453.49375	.....do	28
453.500	.....do	12
453.50625	.....do	12, 28
453.51250	.....do	12, 24
453.51875	.....do	12, 28
453.525	.....do	.....
453.53125	.....do	28
453.53750	.....do	24
453.54375	.....do	28
453.550	.....do	12
453.55625	.....do	12, 28
453.56250	.....do	12, 24
453.56875	.....do	12, 28
453.575	.....do	.....
453.58125	.....do	28
453.58750	.....do	24
453.59375	.....do	28
453.600	Base or mobile	12
453.60625	.....do	12, 28
453.61250	.....do	12, 24
453.61875	.....do	12, 28
453.625	.....do	.....
453.63125	.....do	28
453.63750	.....do	24
453.64375	.....do	28
453.650	.....do	12
453.65625	.....do	12, 28
453.66250	.....do	12, 24
453.66875	.....do	12, 28
453.675	.....do	.....
453.68125	.....do	28
453.68750	.....do	24
453.69375	.....do	28
453.700	.....do	12
453.70625	.....do	12, 28
453.71250	.....do	12, 24
453.71875	.....do	12, 28
453.725	.....do	.....
453.73125	.....do	28
453.73750	.....do	24
453.74375	.....do	28
453.750	.....do	12
453.75625	.....do	12, 28
453.76250	.....do	12, 24
453.76875	.....do	12, 28
453.775	.....do	.....
453.78125	.....do	28
453.78750	.....do	24
453.79375	.....do	28
453.800	.....do	12
453.80625	.....do	12, 28
453.81250	.....do	12, 24
453.81875	.....do	12, 28
453.825	.....do	.....
453.83125	.....do	28
453.83750	.....do	24
453.84375	.....do	28
453.850	.....do	12

LOCAL GOVERNMENT RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
453.85625	.....do	12, 28
453.86250	.....do	12, 24
453.86875	.....do	12, 28
453.875	.....do	.....
453.88125	.....do	28
453.88750	.....do	24
453.89375	.....do	28
453.900	.....do	12
453.90625	.....do	12, 28
453.91250	.....do	12, 24
453.91875	.....do	12, 28
453.925	.....do	.....
453.93125	.....do	28
453.93750	.....do	24
453.94375	.....do	28
453.950	.....do	12
453.95625	.....do	12, 28
453.96250	.....do	12, 24
453.96875	.....do	12, 28
453.975	.....do	.....
453.98125	.....do	28
453.98750	.....do	24
453.99375	.....do	28
458.025	Radio call boxes, fixed	11, 13
458.03750	Mobile	24
458.050	.....do	12
458.05625	.....do	12, 28
458.06250	.....do	12, 24
458.06875	.....do	12, 28
458.075	Radio call boxes, fixed	11, 13
458.08750	Mobile	24
458.100	.....do	12
458.10625	.....do	12, 28
458.11250	.....do	12, 24
458.11875	.....do	12, 28
458.125	Radio call boxes, fixed	11, 13
458.13750	Mobile	24
458.150	.....do	12
458.15625	.....do	12, 28
458.16250	.....do	12, 24
458.16875	.....do	12, 28
458.175	Radio call boxes, fixed	11, 13
458.18750	Mobile	24
458.200	.....do	12
458.20625	.....do	12, 28
458.21250	.....do	12, 24
458.21875	.....do	12, 28
458.225	.....do	.....
458.23125	.....do	28
458.23750	.....do	24
458.24375	.....do	28
458.250	.....do	12
458.25625	.....do	12, 28
458.26250	.....do	12, 24
458.26875	.....do	12, 28
458.275	.....do	.....
458.28125	.....do	28
458.28750	.....do	24
458.29375	.....do	28
458.300	.....do	12
458.30625	.....do	12, 28
458.31250	.....do	12, 24
458.31875	.....do	12, 28
458.325	.....do	.....
458.33125	.....do	28
458.33750	.....do	24
458.34375	.....do	28
458.350	.....do	12
458.35625	.....do	12, 28
458.36250	.....do	12, 24
458.36875	.....do	12, 28
458.375	.....do	.....
458.38125	.....do	28
458.38750	.....do	24
458.39375	.....do	28
458.400	.....do	12
458.40625	.....do	12, 28
458.41250do	12, 24
458.41875do	12, 28
458.425do
458.43125do	28
458.43750do	24
458.44375do	28

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Frequency or band	Class of station(s)	Limitations
458.450do	12
458.45625do	12, 28
458.46250 .....	.....do	12, 24
458.46875 .....	.....do	12, 28
458.475 .....	.....do .....	.....
458.48125 .....	.....do	28
458.48750 .....	.....do	24
458.49375 .....	.....do	28
458.500 .....	.....do	12
458.50625 .....	.....do	12, 28
458.51250 .....	.....do	12, 24
458.51875 .....	.....do	12, 28
458.525 .....	.....do .....	.....
458.53125 .....	.....do	28
458.53750 .....	.....do	24
458.54375 .....	.....do	28
458.550 .....	.....do	12
458.55625 .....	.....do	12, 28
458.56250 .....	.....do	12, 24
458.56875 .....	.....do	12, 28
458.575 .....	.....do .....	.....
458.58125 .....	.....do	28
458.58750 .....	.....do	24
458.59375 .....	.....do	28
458.600 .....	.....do	12
458.60625 .....	.....do	12, 28
458.61250 .....	.....do	12, 24
458.61875 .....	.....do	12, 28
458.625 .....	.....do .....	.....
458.63125 .....	.....do	28
458.63750 .....	.....do	24
458.64375 .....	.....do	28
458.650 .....	.....do	12
458.65625 .....	.....do	12, 28
458.66250 .....	.....do	12, 24
458.66875 .....	.....do	12, 28
458.675 .....	.....do .....	.....
458.68125 .....	.....do	28
458.68750 .....	.....do	24
458.69375 .....	.....do	28
458.700 .....	.....do	12
458.70625 .....	.....do	12, 28
458.71250 .....	.....do	12, 24
458.71875 .....	.....do	12, 28
458.725 .....	.....do .....	.....
458.73125 .....	.....do	28
458.73750 .....	.....do	24
458.74375 .....	.....do	28
458.750 .....	.....do	12
458.75625 .....	.....do	12, 28
458.76250 .....	.....do	12, 24
458.76875 .....	.....do	12, 28
458.775 .....	.....do .....	.....
458.78125 .....	.....do	28
458.78750 .....	.....do	24
458.79375 .....	.....do	28
458.800 .....	.....do	12
458.80625 .....	.....do	12, 28
458.81250 .....	.....do	12, 24
458.81875 .....	.....do	12, 28
458.825 .....	.....do .....	.....
458.83125 .....	.....do	28
458.83750 .....	.....do	24
458.84375 .....	.....do	28
458.850 .....	.....do	12
458.85625 .....	.....do	12, 28
458.86250 .....	.....do	12, 24
458.86875 .....	.....do	12, 28
458.875 .....	.....do .....	.....
458.88125 .....	.....do	28
458.88750 .....	.....do	24
458.89375 .....	.....do	28
458.900 .....	.....do	12
458.90625 .....	.....do	12, 28
458.91250 .....	.....do	12, 24
458.91875 .....	.....do	12, 28
458.925 .....	.....do .....	.....
458.93125 .....	.....do	28
458.93750 .....	.....do	24
458.94375 .....	.....do	28
458.950 .....	.....do	12
458.95625 .....	.....do	12, 28
458.96250 .....	.....do	12, 24

LOCAL GOVERNMENT RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
458.96875 .....	.....do	12, 28
458.975 .....	.....do .....	.....
458.98125 .....	.....do	28
458.98750 .....	.....do	24
458.99375 .....	.....do	28
470 to 512	Base or mobile	14
806 to 824	Mobile	15
851 to 869	Base or mobile	15
928 and above	Operational-fixed	16
929–930	Base only	26
1427 to 1435	Operational fixed, base or mobile	17
2450 to 2500	Base or mobile	18
10,550 to 10,680* .....	.....do .....	.....

* The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) This frequency is shared with the Special Emergency Radio Services and is available for assignment to the official state guard or comparable organization of a State, territory, possession, or the District of Columbia which is shown to be duly created by law and subject to the control of the highest official of the governmental entity involved, and may be used for emergency communications and for essential communications related to training and maintenance of an efficient organization. In addition to base and mobile stations, this frequency may be assigned to fixed stations on a secondary basis to base or mobile stations. Upon a showing of need, the use of a second frequency in the band 2505–3500 kHz may be made available to these organizations through appropriate arrangements with Government agencies for restricted area use on a shared basis with maximum power output, emission, and hours of operation determined on the basis of the technical conditions involved in using the selected frequency in the particular area.

(2) This frequency is shared with the Police Radio Service.

(3) The maximum output power of any transmitter authorized to operate on this frequency shall not exceed 2 watts.

(4) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(5) This frequency is not available for assignment in this service in Puerto Rico or the Virgin Islands.

(6) Assignment and use of frequencies in the band 72–76 MHz are governed by § 90.257 for operational-fixed stations and by § 90.241 for emergency call box operations. Specific frequencies are listed at § 90.257(a)(1).

(7) The maximum power output of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobile stations. A1A, A1D, A2B, A2D, F1B, F1D, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(8) For FM transmitters, the sum of the highest modulating frequency in hertz and the amount of the frequency deviation or swing in hertz may not exceed 1700 Hz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters, the highest modulating frequency may not exceed 1200 Hz. The carrier frequency must be maintained within .0005 percent of the center of the frequency band, and the authorized bandwidth may not exceed 3 kHz.

(9) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations. The height of the antenna system may not exceed 15.24 meters (50 ft.) above ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(10) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(11) This frequency is available for systems first licensed prior to March 31, 1980, for radio call box communications related to safety on highways in accordance with the provisions of §90.241(c). No new systems will be authorized of this nature, but systems authorized prior to March 31, 1980 may be modified, expanded, and renewed. Also, effective April 2, 1993, this frequency is shared with EMRS systems in accordance with §90.27.

(12) This frequency is available in this service on a shared basis with all other Public-Safety Radio Services.

(13) Available for medical services mobile operations in the Emergency Medical Radio Service in accordance with §90.27(c)(22).

(14) Subpart L contains rules for assignment of frequencies in the 470-512 MHz band.

(15) Subpart S contains rules for assignment of frequencies in the 806-824 MHz and 851-869 MHz bands.

(16) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(17) This frequency band is available to stations in this service subject to the provisions of §90.259.

(18) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5-2500 MHz band, no applications for new stations or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(19) Use of this frequency is limited to stations located at least 120.7 km (75 miles) from the center of any urbanized area of 200,000 or more population (U.S. Census of

Population 1970). Operation is on a secondary basis to that of the Power Radio Service.

(20) For FM transmitters, the sum of the highest modulating frequency in Hertz and the amount of the frequency deviation or swing in Hertz may not exceed 2800 Hz and the maximum deviation may not exceed 2.5 kHz. For AM transmitters, the highest modulation frequency may not exceed 2000 Hz. The carrier frequency must be maintained within .0005 percent of the center of the frequency band, and the authorized bandwidth may not exceed 6 kHz.

(21) This frequency is available on a shared basis with the Power, Petroleum, Forest Products, Special Industrial, Business, and Manufacturers Radio Services for remote control and telemetry operations.

(22) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 dB. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160° of azimuth.

(23) This frequency is available for use by Travelers' Information Stations in accordance with §90.242.

(24) This frequency is not available in the 150-170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450-470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(25) Only the central governments of the fifty individual States, the District of Columbia, and the insular areas of the Commonwealth of the Northern Mariana Islands, the Commonwealth of Puerto Rico, and the unincorporated territories of American Samoa, Guam and the United States Virgin Islands are eligible to be licensed to use this spectrum, and then only for disaster communications purposes. Licensees may not use this spectrum to provide operational communications circuits. See also, §90.264.

(26) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(27) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(28) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(29) Assignment of frequencies in this band are subject to the provisions of §90.173.

(30) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(31) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from

regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also § 90.253.)

(1) Substitution of frequencies available below 25 MHz may be made in accordance with the provisions of § 90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. See also § 90.257.

(4) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 39.99 to 40.00 MHz and 42.00 to 42.01 MHz, are available for assignment for developmental operation subject to the provisions of subpart Q.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only two frequencies or pairs of frequencies in the paired frequency mode of operation will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with the operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation.

(2) The frequency 39.06 MHz may be assigned notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(4) A licensee of a radio station in this service may operate radio units for the purpose of determining distance, direction, speed, or position by means of a radiolocation device on any frequency available for radiolocation purposes without specific authorization from the Commission, provided type accepted equipment or equipment authorized pursuant to § 90.203(b) (4) and (5) is used and all other rule requirements are satisfied.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307; secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3))

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.17, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.19 Police Radio Service.

(a) *Eligibility.* Any territory, possession, State, county, city, town, and similar governmental entity including a governmental institution authorized by law to provide its own police protection, is eligible to hold authorizations in the Police Radio Service to operate radio stations for transmission of communications essential to official police activities of the licensee.

(b) [Reserved]

(c) *International police radiocommunication.* Police radio licensees which are located in close proximity to the borders of the United States may be authorized to communicate internationally. Request for such authority shall be written and signed and submitted in duplicate. The request shall include information as to the station with which communication will be conducted, and the frequency, power, emission, etc., that will be used. If authorized, such international communication must be conducted in accordance with Article 5 of the Inter-American Radio Agreement, Washington, DC, 1949 which reads as follows:

Article 5. *Police radio stations.* When the American countries authorize their police radio stations to exchange emergency information by radio with similar stations of another country, the following rules shall be applied.

(a) Only police radio stations located close to the boundaries of contiguous countries shall be allowed to exchange this information.

(b) In general, only important police messages shall be handled, such as those which would lose their value, because of slowness and time limitations if sent on other communication systems.

(c) Frequencies used for radiotelephone communications with mobile police units shall not be used for radiotelegraph communications.

(d) Radiotelephone communications shall be conducted only on frequencies assigned for radiotelephony.

(e) Radiotelegraph communications shall be conducted on the following frequencies: 2804 kHz calling, 2808 kHz working, 2812 kHz working, 5195 kHz day calling, 5185 kHz day working, 5140 kHz day working.

(f) The characteristics of police radio stations authorized to exchange information shall be notified to the International Telecommunication Union, Geneva, Switzerland.

(g) The abbreviations contained in Appendix 9 of the Atlantic City Radio Regulations shall be used to the greatest possible extent.

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Service indications are as follows: "P", priority, for messages that are to be sent immediately, regardless of the number of other messages on file. If no service indication is given, the messages are to be transmitted in the order of receipt.

(h) The message shall contain the preamble, address, text and signature, as follows:

Preamble. The preamble of the message shall consist of the following: the serial number preceded by the letters "NR", service indications, as appropriate; the group count according to standard cable count system; the letters "CK", followed by numerals indicating the number of words contained in the text of the message; office and country of origin (not abbreviations); day, month, and hour of filing;

Address. The address must be as complete as possible and shall include the name of the addressee with any supplementary particulars necessary for immediate delivery of the message;

Text. The text may be either in plain language or code;

Signature. The signature shall include the name and title of the person originating the message.

(d) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Police Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (e) of this section:

POLICE RADIO SERVICE FREQUENCY TABLE		
Frequency or band	Class of station(s)	Limitations
Kilohertz		
1722	Operational fixed, base or mobile.	2, 3
1730 .....	.....do	2, 3
2366 .....	.....do	1, 2
2382 .....	.....do	2
2390 .....	.....do	1, 2
2406 .....	.....do	2
2430 .....	.....do	2
2442 .....	.....do	2
2450 .....	.....do	2
2458 .....	.....do	2
2482 .....	.....do	2
2490 .....	.....do	2, 3
Megahertz		
37.02	Mobile	
37.04	Base or mobile	
37.06 .....	.....do	
37.08 .....	.....do	
37.10 .....	.....do	9
37.12 .....	.....do	
37.14 .....	.....do	
37.16 .....	.....do	
37.18 .....	.....do	9
37.20 .....	.....do	
37.22 .....	.....do	
37.24 .....	.....do	
37.26 .....	.....do	9
37.28 .....	.....do	
37.30 .....	.....do	
37.32 .....	.....do	
37.34	Mobile	

POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
37.36	Base or mobile	
37.38	Mobile	
37.40	Base or mobile	
37.42	Mobile	
39.02	Base or mobile	
39.04 .....	.....do	
39.06 .....	.....do	9, 10
39.08 .....	.....do	
39.10 .....	.....do	9
39.12 .....	.....do	
39.14 .....	.....do	
39.16 .....	.....do	
39.18 .....	.....do	9
39.20 .....	.....do	
39.22 .....	.....do	
39.24 .....	.....do	
39.26	Mobile	
39.28	Base or mobile	
39.30	Mobile	
39.32	Base or mobile	
39.34	Mobile	
39.36	Base or mobile	
39.38	Mobile	
39.40	Base or mobile	
39.42 .....	.....do	
39.44 .....	.....do	
39.46 .....	.....do	11
39.48 .....	.....do	
39.50 .....	.....do	9
39.52 .....	.....do	
39.54 .....	.....do	
39.56 .....	.....do	
39.58 .....	.....do	9
39.60 .....	.....do	
39.62 .....	.....do	
39.64 .....	.....do	
39.66	Mobile	
39.68	Base or mobile	
39.70	Mobile	
39.72	Base or mobile	
39.74	Mobile	
39.76	Base or mobile	
39.78	Mobile	
39.80	Base or mobile	
39.82 .....	.....do	9
39.84 .....	.....do	
39.86 .....	.....do	
39.88 .....	.....do	
39.90 .....	.....do	9
39.92 .....	.....do	
39.94 .....	.....do	
39.96 .....	.....do	9
39.98 .....	.....do	
42.02 .....	.....do	2, 3, 12
42.04 .....	.....do	2, 3, 12
42.06 .....	.....do	2, 3, 12
42.08 .....	.....do	2, 3, 12
42.10 .....	.....do	2, 3, 12
42.12 .....	.....do	2, 3, 12
42.14 .....	.....do	2, 3, 12
42.16 .....	.....do	2, 3, 12
42.18	Mobile	2, 12
42.20 .....	.....do	2, 12
42.22 .....	.....do	2, 12
42.24 .....	.....do	2, 12
42.26 .....	.....do	2, 12
42.28 .....	.....do	2, 12
42.30 .....	.....do	2, 12
42.32	Base or mobile	2, 3, 12
42.34 .....	.....do	2, 3, 12
42.36 .....	.....do	2, 3, 12
42.38 .....	.....do	2, 3, 12
42.40 .....	.....do	2, 3, 12, 28
42.42 .....	.....do	2, 3, 12
42.44 .....	.....do	2, 3, 12
42.46 .....	.....do	2, 3, 12
42.48 .....	.....do	2, 3, 12
42.50do	2, 3, 12
42.52do	2, 3, 12
42.54do	2, 3, 12
42.56do	2, 3, 12
42.58do	2, 3, 12
42.60do	2, 3, 12

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POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
42.62 .....	.....do	2, 3, 12
42.64 .....	.....do	2, 3, 12
42.66	Mobile	2, 12
42.68 .....	.....do	2, 12
42.70 .....	.....do	2, 12
42.72 .....	.....do	2, 12
42.74 .....	.....do	2, 12
42.76 .....	.....do	2, 12
42.78 .....	.....do	2, 12
42.80	Base or mobile	2, 3, 12
42.82 .....	.....do	2, 3, 12
42.84 .....	.....do	2, 3, 12
42.86 .....	.....do	2, 3, 12
42.88 .....	.....do	2, 3, 12
42.90 .....	.....do	2, 3, 12
42.92 .....	.....do	2, 3, 12
42.94 .....	.....do	2, 3, 12
44.62 .....	.....do	2, 3, 12
44.66 .....	.....do	2, 3, 12
44.70 .....	.....do	2, 3, 12
44.74 .....	.....do	2, 3, 12
44.78	Mobile	2, 12
44.82 .....	.....do	2, 12
44.86 .....	.....do	2, 12
44.90 .....	.....do	2, 12
44.94	Base or mobile	2, 3, 12
44.98 .....	.....do	2, 3, 12
45.02 .....	.....do	2, 3, 12
45.06 .....	.....do	2, 3, 12
45.10 .....	.....do .....	.....
45.14 .....	.....do .....	.....
45.18 .....	.....do .....	.....
45.22 .....	.....do .....	.....
45.26	Mobile .....	.....
45.30 .....	.....do .....	.....
45.34 .....	.....do .....	.....
45.38 .....	.....do .....	.....
45.42	Base or mobile .....	.....
45.46 .....	.....do .....	.....
45.50 .....	.....do .....	.....
45.54 .....	.....do .....	.....
45.58 .....	.....do .....	.....
45.62 .....	.....do .....	.....
45.66 .....	.....do .....	.....
45.70 .....	.....do .....	.....
45.74	Mobile .....	.....
45.78 .....	.....do .....	.....
45.82 .....	.....do .....	.....
45.86	Base or mobile	11
45.90 .....	.....do	29
45.94 .....	.....do .....	.....
45.98 .....	.....do .....	.....
46.02 .....	.....do .....	.....
72.00–76.00	Operational fixed	13
150 to 170	Base or mobile	33, 35
154.650	Mobile .....	.....
154.6575 .....	.....do	26
154.665	Base or mobile	12
154.6725 .....	.....do	12, 26
154.680 .....	.....do	12
154.6875 .....	.....do	12, 26
154.695 .....	.....do	12
154.7025 .....	.....do	12, 26
154.710	Mobile .....	.....
154.7175 .....	.....do	26
154.725	Base or mobile .....	.....
154.7325 .....	.....do	26
154.740 .....	.....do .....	.....
154.7475 .....	.....do	26
154.755 .....	.....do .....	.....
154.7625 .....	.....do	26
154.770	Mobile .....	.....
154.7775 .....	.....do	26
154.785	Base or mobile .....	.....
154.7925 .....	.....do	26
154.800 .....	.....do .....	.....
154.8075 .....	.....do	26
154.815 .....	.....do .....	.....
154.8225 .....	.....do	26
154.830	Mobile .....	.....
154.8375 .....	.....do	26
154.845	Base or mobile .....	.....
154.8525 .....	.....do	26
154.860 .....	.....do .....	.....

POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
154.8675 .....	.....do	26
154.875 .....	.....do .....	.....
154.8825 .....	.....do	26
154.890	Mobile .....	.....
154.8975 .....	.....do	26
154.905	Base or mobile	12
154.9125 .....	.....do	12, 26
154.920 .....	.....do	12
154.9275 .....	.....do	12, 26
154.935 .....	.....do	12
154.9425 .....	.....do	12, 26
154.950	Mobile .....	.....
154.9575 .....	.....do	26
155.01	Base or mobile .....	.....
155.0175 .....	.....do	26
155.07 .....	.....do .....	.....
155.0775 .....	.....do	26
155.13 .....	.....do .....	.....
155.1375 .....	.....do	26
155.19 .....	.....do .....	.....
155.1975 .....	.....do	26
155.25 .....	.....do .....	.....
155.2575 .....	.....do	26
155.31 .....	.....do .....	.....
155.3175 .....	.....do	26
155.370 .....	.....do .....	.....
155.3775 .....	.....do	26
155.415 .....	.....do .....	.....
155.4225 .....	.....do	26
155.430 .....	.....do .....	.....
155.4375 .....	.....do	26
155.445 .....	.....do	12
155.4525 .....	.....do	12, 26
155.460 .....	.....do	12
155.4675 .....	.....do	12, 26
155.475 .....	.....do	14
155.4825 .....	.....do	14, 26
155.490 .....	.....do .....	.....
155.4975 .....	.....do	26
155.505 .....	.....do	12
155.5125 .....	.....do	12, 26
155.520 .....	.....do .....	.....
155.5275 .....	.....do	26
155.535 .....	.....do .....	.....
155.5425 .....	.....do	26
155.550 .....	.....do .....	.....
155.5575 .....	.....do	26
155.565 .....	.....do .....	.....
155.5725 .....	.....do	26
155.580 .....	.....do .....	.....
155.5875 .....	.....do	26
155.595 .....	.....do .....	.....
155.6025 .....	.....do	26
155.610 .....	.....do .....	.....
155.6175 .....	.....do	26
155.625 .....	.....do .....	.....
155.6325 .....	.....do	26
155.640 .....	.....do .....	.....
155.6475 .....	.....do	26
155.655 .....	.....do .....	.....
155.6625 .....	.....do	26
155.670 .....	.....do .....	.....
155.6775 .....	.....do	26
155.685 .....	.....do .....	.....
155.6925 .....	.....do	26
155.700 .....	.....do .....	.....
155.7075 .....	.....do	26
155.730 .....	.....do .....	.....
155.7375 .....	.....do	26
155.79 .....	.....do .....	.....
155.7975 .....	.....do	26
155.85	Mobile .....	.....
155.8575 .....	.....do	26
155.91 .....	.....do .....	.....
155.9175 .....	.....do	26
155.97 .....	.....do .....	.....
155.9775 .....	.....do	26
156.03 .....	.....do .....	.....
156.0375do	26
156.09do
156.0975do	26
156.15do
156.1575do	26
156.210	Base or mobile

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POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
156.2175 .....	.....do	26
158.7225 .....	.....do	32
158.730 .....	.....do .....	.....
158.7375 .....	.....do	26
158.790 .....	.....do .....	.....
158.7975 .....	.....do	26
158.850 .....	.....do .....	.....
158.8575 .....	.....do	26
158.910	Mobile .....	.....
158.9175 .....	.....do	26
158.970 .....	.....do .....	.....
158.9775 .....	.....do	26
159.030 .....	.....do .....	.....
159.0375 .....	.....do	26
159.090	Base or mobile .....	.....
159.0975 .....	.....do	26
159.150 .....	.....do .....	.....
159.1575 .....	.....do	26
159.210 .....	.....do .....	.....
159.2175 .....	.....do	26
169–172	Mobile	30
173.075	Base or mobile	31
220–222	Base and mobile	4
450–470	Fixed, base, or mobile	15, 33
453.0375	Mobile	34
453.050	Base or mobile	16
453.05625 .....	.....do	16, 32
453.06250 .....	.....do	16, 26
453.06875 .....	.....do	16, 32
453.0875	Mobile	34
453.100	Base or mobile	16
453.10625 .....	.....do	16, 32
453.11250 .....	.....do	16, 26
453.11875 .....	.....do	16, 32
453.1375	Mobile	34
453.150	Base or mobile	16
453.15625 .....	.....do	16, 32
453.16250 .....	.....do	16, 26
453.16875 .....	.....do	16, 32
453.1875	Mobile	34
453.200	Base or mobile	16
453.20625 .....	.....do	16, 32
453.21250 .....	.....do	16, 26
453.21875 .....	.....do	16, 32
453.2375	Mobile	34
453.250	Base or mobile	16
453.25625 .....	.....do	16, 32
453.26250 .....	.....do	16, 26
453.26875 .....	.....do	16, 32
453.2875	Mobile	34
453.300	Base or mobile	16
453.30625 .....	.....do	16, 32
453.31250 .....	.....do	16, 26
453.31875 .....	.....do	16, 32
453.3375	Mobile	34
453.350	Base or mobile	16
453.35625 .....	.....do	16, 32
453.36250 .....	.....do	16, 26
453.36875 .....	.....do	16, 32
453.3875	Mobile	34
453.400	Base or mobile	16
453.40625 .....	.....do	16, 32
453.41250 .....	.....do	16, 26
453.41875 .....	.....do	16, 32
453.4375	Mobile	34
453.450	Base or mobile	16
453.45625 .....	.....do	16, 32
453.46250 .....	.....do	16, 26
453.46875 .....	.....do	16, 32
453.4875	Mobile	34
453.500	Base or mobile	16
453.50625 .....	.....do	16, 32
453.51250 .....	.....do	16, 26
453.51875 .....	.....do	16, 32
453.5375	Mobile	34
453.550	Base or mobile	16
453.55625 .....	.....do	16, 32
453.56250 .....	.....do	16, 26
453.56875 .....	.....do	16, 32
453.5875	Mobile	34
453.600	Base or mobile	16
453.60625 .....	.....do	16, 32
453.61250 .....	.....do	16, 26
453.61875 .....	.....do	16, 32

POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
453.6375	Mobile	34
453.650	Base or mobile	16
453.65625 .....	.....do	16, 32
453.66250 .....	.....do	16, 26
453.66875 .....	.....do	16, 32
453.6875	Mobile	34
453.700	Base or mobile	16
453.70625 .....	.....do	16, 32
453.71250 .....	.....do	16, 26
453.71875 .....	.....do	16, 32
453.7375	Mobile	34
453.750	Base or mobile	16
453.75625 .....	.....do	16, 32
453.76250 .....	.....do	16, 26
453.76875 .....	.....do	16, 32
453.7875	Mobile	34
453.800	Base or mobile	16
453.80625 .....	.....do	16, 32
453.81250 .....	.....do	16, 26
453.81875 .....	.....do	16, 32
453.8375	Mobile	34
453.850	Base or mobile	16
453.85625 .....	.....do	16, 32
453.86250 .....	.....do	16, 26
453.86875 .....	.....do	16, 32
453.8875	Mobile	34
453.900	Base or mobile	16
453.90625 .....	.....do	16, 32
453.91250 .....	.....do	16, 26
453.91875 .....	.....do	16, 32
453.9375	Mobile	34
453.950	Base or mobile	16
453.95625 .....	.....do	16, 32
453.96250 .....	.....do	16, 26
453.96875 .....	.....do	16, 32
458.0375	Mobile	34
458.050 .....	.....do	16
458.05625 .....	.....do	16, 32
458.06250 .....	.....do	16, 26
458.06875 .....	.....do	16, 32
458.0875 .....	.....do	34
458.100 .....	.....do	16
458.10625 .....	.....do	16, 32
458.11250 .....	.....do	16, 26
458.11875 .....	.....do	16, 32
458.1375 .....	.....do	34
458.150 .....	.....do	16
458.15625 .....	.....do	16, 32
458.16250 .....	.....do	16, 26
458.16875 .....	.....do	16, 32
458.1875 .....	.....do	34
458.200 .....	.....do	16
458.20625 .....	.....do	16, 32
458.21250 .....	.....do	16, 26
458.21875 .....	.....do	16, 32
458.2375 .....	.....do	34
458.250 .....	.....do	16
458.25625 .....	.....do	16, 32
458.26250 .....	.....do	16, 26
458.26875 .....	.....do	16, 32
458.2875 .....	.....do	34
458.300 .....	.....do	16
458.30625 .....	.....do	16, 32
458.31250 .....	.....do	16, 26
458.31875 .....	.....do	16, 32
458.3375 .....	.....do	34
458.350 .....	.....do	16
458.35625 .....	.....do	16, 32
458.36250 .....	.....do	16, 26
458.36875 .....	.....do	16, 32
458.3875 .....	.....do	34
458.400 .....	.....do	16
458.40625 .....	.....do	16, 32
458.41250 .....	.....do	16, 26
458.41875 .....	.....do	16, 32
458.4375 .....	.....do	34
458.450 .....	.....do	16
458.45625 .....	.....do	16, 32
458.46250 .....	.....do	16, 26
458.46875do	16, 32
458.4875do	34
458.500do	16
458.50625do	16, 32
458.51250do	16, 26

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Frequency or band	Class of station(s)	Limitations
458.51875do	16, 32
458.5375do	34
458.550	.....do	16
458.55625	.....do	16, 32
458.56250	.....do	16, 26
458.56875	.....do	16, 32
458.5875	.....do	34
458.600	.....do	16
458.60625	.....do	16, 32
458.61250	.....do	16, 26
458.61875	.....do	16, 32
458.6375	.....do	34
458.650	.....do	16
458.65625	.....do	16, 32
458.66250	.....do	16, 26
458.66875	.....do	16, 32
458.6875	.....do	34
458.700	.....do	16
458.70625	.....do	16, 32
458.71250	.....do	16, 26
458.71875	.....do	16, 32
458.7375	.....do	34
458.750	.....do	16
458.75625	.....do	16, 32
458.76250	.....do	16, 26
458.76875	.....do	16, 32
458.7875	.....do	34
458.800	.....do	16
458.80625	.....do	16, 32
458.81250	.....do	16, 26
458.81875	.....do	16, 32
458.8375	.....do	34
458.850	.....do	16
458.85625	.....do	16, 32
458.86250	.....do	16, 26
458.86875	.....do	16, 32
458.8875	.....do	34
458.900	.....do	16
458.90625	.....do	16, 32
458.91250	.....do	16, 26
458.91875	.....do	16, 32
458.9375	.....do	34
458.950	.....do	16
458.95625	.....do	16, 32
458.96250	.....do	16, 26
458.96875	.....do	16, 32
460.0125	.....do	26, 36
460.01875	Base or mobile	32
460.025	.....do	.....
460.03125	.....do	32
460.03750	.....do	26
460.04375	.....do	32
460.050	.....do	.....
460.05626	.....do	32
460.06250	.....do	26
460.06875	.....do	32
460.075	.....do	.....
460.08125	.....do	32
460.08750	.....do	26
460.09375	.....do	32
460.100	.....do	.....
460.10625	.....do	32
460.11250	.....do	26
460.11875	.....do	32
460.125	.....do	.....
460.13125	.....do	32
460.13750	.....do	26
460.14375	.....do	32
460.150	.....do	.....
460.15625	.....do	32
460.16250	.....do	26
460.16875	.....do	32
460.175	.....do	.....
460.18125	.....do	32
460.18750	.....do	26
460.19375	.....do	32
460.200	.....do	.....
460.20625	.....do	32
460.21250	.....do	26
460.21875	.....do	32
460.225	.....do	.....
460.23125	.....do	32
460.23750	.....do	26
460.24375	.....do	32

POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
460.250	.....do	.....
460.25625	.....do	32
460.26250	.....do	26
460.26875	.....do	32
460.275	.....do	.....
460.28125	.....do	32
460.28750	.....do	26
460.29375	.....do	32
460.300	.....do	.....
460.30625	.....do	32
460.31250	.....do	26
460.31875	.....do	32
460.325	.....do	.....
460.33125	.....do	32
460.33750	.....do	26
460.34375	.....do	32
460.350	.....do	.....
460.35625	.....do	32
460.36250	.....do	26
460.36875	.....do	32
460.375	.....do	.....
460.38125	.....do	32
460.38750	.....do	26
460.39375	.....do	32
460.400	.....do	.....
460.40625	.....do	32
460.41250	.....do	26
460.41875	.....do	32
460.425	.....do	.....
460.43125	.....do	32
460.43750	.....do	26
460.44375	.....do	32
460.450	.....do	.....
460.45625	.....do	32
460.46250	.....do	26
460.46875	.....do	32
460.475	.....do	.....
460.48125	.....do	32
460.48750	.....do	26
460.49375	.....do	32
460.500	.....do	.....
460.50625	.....do	32
460.51250	.....do	26
460.51875	.....do	32
460.525	.....do	17
460.53125	.....do	17, 32
460.53750	.....do	17, 26
460.54375	.....do	17, 32
460.550	.....do	17
460.55625	.....do	17, 32
460.56250	.....do	17, 26
460.56875	.....do	17, 32
465.0125	Mobile	34
465.025	.....do	.....
465.03125	.....do	32
465.03750	.....do	26
465.04375	.....do	32
465.050	.....do	.....
465.05625	.....do	32
465.06250	.....do	26
465.06875	.....do	32
465.075	.....do	.....
465.08125	.....do	32
465.08750	.....do	26
465.09375	.....do	32
465.100	.....do	.....
465.10625	.....do	32
465.11250	.....do	26
465.11875	.....do	32
465.125	.....do	.....
465.13125	.....do	32
465.13750	.....do	26
465.14375	.....do	32
465.150	.....do	.....
465.15625	.....do	32
465.16250	.....do	26
465.16875	.....do	32
465.175	.....do	.....
465.18125do	32
465.18750do	26
465.19375do	32
465.200do
465.20625do	32
465.21250do	26

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POLICE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
465.21875 .....	.....do	32
465.225 .....	.....do .....	.....
465.23125 .....	.....do	32
465.23750 .....	.....do	26
465.24375 .....	.....do	32
465.250 .....	.....do .....	.....
465.25625 .....	.....do	32
465.26250 .....	.....do	26
465.26875 .....	.....do	32
465.275 .....	.....do .....	.....
465.28125 .....	.....do	32
465.28750 .....	.....do	26
465.29375 .....	.....do	32
465.300 .....	.....do .....	.....
465.30625 .....	.....do	32
465.31250 .....	.....do	26
465.31875 .....	.....do	32
465.325 .....	.....do .....	.....
465.33125 .....	.....do	32
465.33750 .....	.....do	26
465.34375 .....	.....do	32
465.350 .....	.....do .....	.....
465.35625 .....	.....do	32
465.36250 .....	.....do	26
465.36875 .....	.....do	32
465.375 .....	.....do .....	.....
465.38125 .....	.....do	32
465.38750 .....	.....do	26
465.39375 .....	.....do	32
465.400 .....	.....do .....	.....
465.40625 .....	.....do	32
465.41250 .....	.....do	26
465.41875 .....	.....do	32
465.425 .....	.....do .....	.....
465.43125 .....	.....do	32
465.43750 .....	.....do	26
465.44375 .....	.....do	32
465.450 .....	.....do .....	.....
465.45625 .....	.....do	32
465.46250 .....	.....do	26
465.46875 .....	.....do	32
465.475 .....	.....do .....	.....
465.48125 .....	.....do	32
465.48750 .....	.....do	26
465.49375 .....	.....do	32
465.500 .....	.....do .....	.....
465.50625 .....	.....do	32
465.51250 .....	.....do	26
465.51875 .....	.....do	32
465.525 .....	.....do	17
465.53125 .....	.....do	17, 32
465.53750 .....	.....do	17, 26
465.54375 .....	.....do	17, 32
465.550	Base or mobile	17
465.55625 .....	.....do	17, 32
465.56250 .....	.....do	17, 26
465.56875 .....	.....do	17, 32
470-512 .....	.....do	21
806-824	Mobile	22
851-869	Base or mobile	22
928 and above	Operational-fixed	23
929-930	Base only	27
1427 to 1435	Operational-fixed, base or mobile	24
2450 to 2500	Base or mobile	25
10,550 to 10,680* .....	.....do .....	.....

*The frequencies in the band 10.55-10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(e) Explanation of assignment limitations appearing in the frequency table of paragraph (d) of this section:

(1) The use of this frequency is on a secondary basis to any Canadian station.

(2) The frequency is available for assignment only in accordance with a geographical assignment plan.

(3) Base stations operating on this frequency and rendering service to state police

mobile units may be authorized to use a maximum output power in excess of the maximum indicated in §90.205 but not in excess of 7500 watts: *Provided*, That such operation is secondary to other stations.

(4) Subpart T contains rules for assignment of frequencies in the 220-222 MHz band.

(5)-(8) [Reserved]

(9) This frequency is shared with the Local Government Radio Service.

(10) The maximum output power of any transmitter authorized to operate on this frequency, after June 1, 1956, shall not exceed two watts. Licensees holding a valid authorization as of June 1, 1956, for base or mobile station operation on this frequency, with a power in excess of two watts, may continue to be authorized for such operation without regard to this power limitation.

(11) This frequency is reserved for assignment to stations for intersystem operations only: *Provided, however*, That licensees holding a valid authorization to use this frequency for local base or mobile operations as of June 1, 1956, may continue to be authorized for such use.

(12) This frequency is reserved primarily for assignment to state police licensees. Assignments to other police licensees will be made only where the frequency is required for coordinated operation with the state police system to which the frequency is assigned. Any request for such assignment must be supported by a statement from the state police system concerned indicating that the assignment is necessary for coordination of police activities.

(13) The frequencies available for use at operational fixed stations in the band 72-76 MHz are listed in §90.257(a)(1). These frequencies, are shared with other services and are available only in accordance with the provisions of §90.257.

(14) This frequency is available nationwide for use in police emergency communications networks operated under statewide law enforcement emergency communications plans. Operations authorized on this frequency which are not in accordance with this limitation may continue until January 1, 1985.

(15) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(16) This frequency is available in this service on a shared basis with all other Public-Safety Radio Services.

(17) This frequency is shared with the Fire and Emergency Medical Radio Services.

(18)-(20) [Reserved]

(21) Subpart L contains rules for assignment of frequencies in the 470-512 MHz band.

(22) Subpart S contains rules for assignment of frequencies in the 806-824 MHz and 851-869 MHz bands.

(23) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(24) This frequency band is available to stations in this service subject to the provisions of §90.259.

(25) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new stations or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(26) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(27) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(28) In the State of Alaska only, the frequency 42.40 MHz is available for assignment on a primary basis to stations in the Common Carrier Rural Radio Service utilizing meteor burst communications. The frequency may be used by private radio stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance with part 22 or 90 of this chapter. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(29) In the State of Alaska only, the frequency 45.90 MHz is available for assignment on a primary basis to private land mobile radio stations utilizing meteor burst communications. The frequency may be used by common carrier stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance with parts 22 and 90 of this chapter. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(30) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(31) This frequency is subject to the provisions of §90.19(f)(5)(7).

(32) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(33) Assignment of frequencies in this band are subject to the provisions of §90.173

(34) This frequency is available for systems first licensed prior to August 18, 1995. No new

systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(35) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(36) Use of this frequency is on a secondary basis and subject to the provisions of §90.267 (a)(3), (a)(4), (a)(5), and (a)(7)

(f) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also §90.253.)

(1) Substitution of frequencies available below 25 MHz may be made in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted.

(4) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 33.99 to 40.00 MHz and 42.00 to 42.01 MHz are available for assignment for developmental operation subject to the provisions of subpart Q.

(5) A licensee in the Police Radio Service may use transmitters on the frequencies indicated below in connection with official police activities without specific authorization from the Commission, provided that such use shall be on a secondary basis and shall not cause harmful interference to services of other licensees operating on regularly assigned frequencies, and further provided that all such use complies with the requirements of Federal, State and local laws.

The provisions of §90.429 of this part shall not apply to transmitters authorized under this paragraph. To be eligible for operations in this manner, the transmitter must comply with all of the following requirements.

(i) In accordance with §90.203 of this part and §2.803 of part 2 of this chapter, the transmitter must be of a type which has been type accepted by the Commission.

(ii) The carrier frequency shall be within the bands of

30.85–30.87 MHz	31.33–31.35 MHz
30.89–30.91 MHz	31.37–31.39 MHz
30.93–30.95 MHz	31.41–31.43 MHz
30.97–30.99 MHz	31.45–31.47 MHz
31.01–31.03 MHz	31.49–31.51 MHz
31.05–31.07 MHz	31.53–31.55 MHz
31.09–31.11 MHz	31.57–31.59 MHz
31.13–31.15 MHz	31.61–31.63 MHz
31.17–31.19 MHz	31.65–31.67 MHz
31.21–31.23 MHz	31.69–31.71 MHz
31.25–31.27 MHz	31.73–31.75 MHz
31.29–31.31 MHz	31.77–31.79 MHz

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31.81–31.83 MHz	46.05–46.60 MHz
31.85–31.87 MHz	47.00–47.41 MHz
31.89–31.91 MHz	150.995–151.490 MHz
31.93–31.95 MHz	153.740–154.445 MHz
31.97–32.00 MHz	154.635–155.195 MHz
33.00–33.03 MHz	155.415–156.250 MHz
33.05–33.07 MHz	158.715–159.465 MHz
33.41–34.00 MHz	453.0125–453.9875 MHz
37.00–37.43 MHz	458.0125–458.9875 MHz
37.89–38.00 MHz	460.0125–460.5125 MHz
39.00–40.00 MHz	460.5625–460.6375 MHz
42.00–42.91 MHz	462.9375–462.9875 MHz
44.61–45.91 MHz	465.0125–465.5125 MHz
45.93–45.95 MHz	465.5625–465.6375 MHz
45.97–45.99 MHz	467.9375–467.9875 MHz
46.01–46.03 MHz	

and must be maintained within 0.005 percent of the frequency of operation. Use on assigned channel center frequencies is not required.

(iii) The emitted signal shall be non-voice modulation (type PO emission).

(iv) The maximum occupied bandwidth, containing 99 percent of the radiated power, shall not exceed 2.0 kHz.

(v) The transmitter output power shall not exceed a mean power of 30 mW nor shall any peak exceed 1 watt peak power, as measured into a 50 ohm resistive load. Should the transmitter be supplied with a permanently attached antenna or should the transmitter and antenna combination be contained in a sealed unit, the following standard may be used in lieu of the above: The field strength of the fundamental signal of the transmitter and antenna combination shall not exceed 0.4 V/m mean or 2.3 V/m peak when measured at a distance of 3 meters.

(vi) The transmitter shall contain positive means to limit the transmission time to no more than 10 days. In the event of a malfunction of this positive means, the transmitter signal shall cease. The use of battery life to accomplish the transmission time limitation is permissible.

(6) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(7) The frequency 173.075 MHz is available for stolen vehicle recovery systems on a shared basis with the Federal Government. Stolen vehicle recovery systems are limited to recovering stolen vehicles and are not authorized for general purpose vehicle tracking or monitoring. Mobile transmitters operating on this frequency are limited to 2.5 watts power output and base transmitters are limited 300 watts ERP. F1D and F2D emissions may be used within a maximum authorized 20 kHz bandwidth. Transmissions from mobiles shall be limited to 200 milliseconds every 10 seconds, except that when a vehicle is being tracked actively, transmissions may be increased to 200 milliseconds every second. Transmissions from base stations will

be limited to a total time of 1 second every minute. Applications for base stations operating on this frequency shall require coordination with the Federal Government. Applicants shall perform an analysis for each base station located within 169 km (105 miles) of a TV channel 7 transmitter of potential interference to TV channel 7 viewers. Such stations will be authorized if the applicant has limited the interference contour to fewer than 100 residences or if the applicant:

(i) Shows that the proposed site is the only suitable location;

(ii) Develops a plan to control any interference caused to TV reception from the operations; and

(iii) Agrees to make such adjustments in the TV receivers affected as may be necessary to eliminate interference caused by its operations. The licensee must eliminate any interference caused by its operation to TV channel 7 reception within 30 days of the time it is notified in writing by the Commission. If this interference is not removed within the 30-day period, operation of the base station must be discontinued. The licensee is expected to help resolve all complaints of interference.

(g) *Limitation on number of frequencies assignable.* Normally only one base and one mobile station frequency, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with §90.247, notwithstanding this limitation.

(2) The frequency 39.06 MHz may be assigned notwithstanding this limitation.

(3) A licensee may use, without special authorization from the Commission, any mobile service frequency between 40 and 952 MHz, listed in subpart B of this part of the rules, for communications in connection with physical surveillance, stakeouts, raids, and other such activities. Such use shall be on a secondary basis to operations of licensees regularly authorized on the assigned frequencies. The maximum output power that may be used for such communications is 2 watts. Transmitters, operating under this provision of the rules, shall be exempted from the station identification requirements of §90.425. Use of Public Safety frequencies not listed in paragraph (d) of this section is conditional on the approval of the coordinator corresponding to each frequency. Spread spectrum transmitters may be operated on Public Safety frequencies between 37 and 952 MHz, providing that they are type accepted by the Commission under the provisions of §§2.803 and 90.203 of the rules, and meet the following conditions:

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(i) Frequency hopping transmitters can be operated, with a maximum output power of 2 watts, on any Public Safety mobile service frequency between 37 and 952 MHz listed in subpart B of this part. At least 20 hopping frequencies shall be used and the average time of occupancy on any frequency shall not be greater than 1/10 second in every 2 seconds;

(ii) Use of spread spectrum transmitters under this section of the rules is subject to approval by the applicable frequency coordinator of the radio services of the district in which the license and equipment are to be used.

(iii) The use of direct sequence spread spectrum equipment is also permitted. Equipment must meet the technical standards of 47 CFR 15.247.

(4) In addition to the frequencies assigned for mobile service operation, one base station frequency above 152 MHz may be assigned as a common frequency to all licensees in a particular area to permit intersystem communication between base stations or mobile stations or both. This frequency, use will not be authorized in any area where all available frequencies are required for independent systems.

(5) Frequencies in the 25-50 MHz, 150-170 MHz, 450-512 MHz and 902-928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(6) A licensee of a radio station in this service may operate radio units for the purpose of determining distance, direction, speed, or position by means of a radiolocation device on any frequency available for radiolocation purposes without specific authorization from the Commission, provided type accepted equipment or equipment authorized pursuant to §90.203(b)(4) and (5) is used and all other rule requirements are satisfied.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307; secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3))

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.19, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§90.21 Fire Radio Service.

(a) *Eligibility.* Any territory, possession, state, county, city, town, or similar governmental entity, and persons or organizations charged with specific fire protection activities are eligible to hold authorizations in the Fire Radio Service to operate radio stations

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for transmission of communications essential to official fire activities of the licensee. Applications from persons or organizations other than governmental entities must be accompanied by a statement from the governmental entity having legal jurisdiction over the area to be served, supporting the request.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Fire Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

FIRE RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
1630	Base or mobile .....	.....
Megahertz		
33.42	Mobile or fixed	1
33.44	Base or mobile .....	.....
33.46	Mobile .....	.....
33.48	Base or mobile .....	.....
33.50	Mobile .....	.....
33.52	Base or mobile .....	.....
33.54	Mobile .....	.....
33.56	Base or mobile .....	.....
33.58	Mobile .....	.....
33.60	Base or mobile .....	.....
33.62	Mobile .....	.....
33.64	Base or mobile .....	.....
33.66	Mobile .....	.....
33.68	Base or mobile .....	.....
33.70 .....	.....do .....	.....
33.72 .....	.....do .....	.....
33.74 .....	.....do .....	.....
33.76 .....	.....do .....	.....
33.78 .....	.....do .....	.....
33.80 .....	.....do .....	.....
33.82 .....	.....do .....	.....
33.84 .....	.....do .....	.....
33.86 .....	.....do .....	.....
33.88 .....	.....do .....	.....
33.90 .....	.....do .....	.....
33.92 .....	.....do .....	.....
33.94 .....	.....do .....	.....
33.96 .....	.....do .....	.....
33.98 .....	.....do .....	.....
45.88 .....	.....do	2
46.06 .....	.....do .....	.....
46.08 .....	.....do .....	.....
46.10 .....	.....do .....	.....
46.12 .....	.....do .....	.....
46.14 .....	.....do .....	.....
46.16 .....	.....do .....	.....
46.18 .....	.....do .....	.....
46.20 .....	.....do .....	.....
46.22	Mobile .....	.....
46.24 .....	.....do .....	.....
46.26 .....	.....do .....	.....
46.28 .....	.....do .....	.....
46.30	Mobile or fixed	1
46.32	Mobile .....	.....
46.34 .....	.....do .....	.....
46.36	Base or mobile .....	.....
46.38 .....	.....do .....	.....
46.40 .....	.....do .....	.....
46.42 .....	.....do .....	.....
46.44 .....	.....do .....	.....
46.46 .....	.....do .....	.....
46.48 .....	.....do .....	.....
46.50do
72.00 to 76.00	Operational fixed	3
72.44	Mobile	19
72.48do	19
72.52do	19

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Frequency or band	Class of station(s)	Limitations
72.56do	19
72.60do	19
75.44do	19
75.48 .....	.....do	19
75.52 .....	.....do	19
75.56 .....	.....do	19
75.60 .....	.....do	19
150 to 170	Base or mobile	21, 23
153.77	Mobile	16
153.7775 .....	.....do	16
153.83	Mobile	18
153.8375 .....	.....do	18, 16
153.890	Mobile	16
153.8975 .....	.....do	16
153.950 .....	.....do	16
153.9575 .....	.....do	16
154.010 .....	.....do	16
154.0175 .....	.....do	4
154.070 .....	.....do	4, 16
154.0775 .....	.....do	4
154.130	Base or mobile	4
154.1375 .....	.....do	4, 16
154.145 .....	.....do	4
154.1525 .....	.....do	4, 16
154.160 .....	.....do	4
154.1675 .....	.....do	4, 16
154.175 .....	.....do	4
154.1825 .....	.....do	4, 16
154.190 .....	.....do	4
154.1975 .....	.....do	4, 16
154.205 .....	.....do	4
154.2125 .....	.....do	4, 16
154.220 .....	.....do	4
154.2275 .....	.....do	4, 16
154.235 .....	.....do	4
154.2425 .....	.....do	4, 16
154.250 .....	.....do	4
154.2575 .....	.....do	4, 16
154.265 .....	.....do	2, 4
154.2725 .....	.....do	2, 4, 16
154.280 .....	.....do	2, 4
154.2875 .....	.....do	2, 4, 16
154.295 .....	.....do	2, 4
154.3025 .....	.....do	2, 4, 16
154.310 .....	.....do	4
154.3175 .....	.....do	4, 16
154.325 .....	.....do	4
154.3325 .....	.....do	4, 16
154.340 .....	.....do	4
154.3475 .....	.....do	4, 16
154.355 .....	.....do	4
154.3625 .....	.....do	4, 26
154.370 .....	.....do	4
154.3775 .....	.....do	4, 16
154.385 .....	.....do	4
154.3925 .....	.....do	4, 16
154.400 .....	.....do	4
154.4075 .....	.....do	4, 16
154.415 .....	.....do	4
154.4225 .....	.....do	4, 16
154.430 .....	.....do	4
154.4375 .....	.....do	4, 16
154.445 .....	.....do	4
154.4525 .....	.....do	4, 16
166.250 .....	.....do	5
169–172	Mobile	14
170.150	Base or mobile	5
220–222	Base and mobile	17
450–470	Fixed, base, or mobile	6, 21
453.0375	Mobile	22
453.050	Base or mobile	7
453.05625 .....	.....do	20
453.06250 .....	.....do	16
453.06875 .....	.....do	20
453.0875	Mobile	22
453.100	Base or mobile	7
453.10625 .....	.....do	7, 20
453.11250 .....	.....do	7, 16
453.11875 .....	.....do	7, 20
453.1375	Mobile	22
453.150	Base or mobile	7
453.15625 .....	.....do	7, 20
453.16250 .....	.....do	7, 16
453.16875 .....	.....do	7, 20

FIRE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
453.1875	Mobile	22
453.200	Base or mobile	7
453.20625 .....	.....do	7, 20
453.21250 .....	.....do	7, 16
453.21875 .....	.....do	7, 20
453.2375	Mobile	22
453.250	Base or mobile	7
453.25625 .....	.....do	7, 20
453.26250 .....	.....do	7, 16
453.26875 .....	.....do	7, 20
453.2875	Mobile	22
453.300	Base or mobile	7
453.30625 .....	.....do	7, 20
453.31250 .....	.....do	7, 16
453.31875 .....	.....do	7, 20
453.3375	Mobile	22
453.350	Base or mobile	7
453.35625 .....	.....do	7, 20
453.36250 .....	.....do	7, 16
453.36875 .....	.....do	7, 20
453.3875	Mobile	22
453.400	Base or mobile	7
453.40625 .....	.....do	7, 20
453.41250 .....	.....do	7, 16
453.41875 .....	.....do	7, 20
453.4375	Mobile	22
453.450	Base or mobile	7
453.45625 .....	.....do	7, 20
453.46250 .....	.....do	7, 16
453.46875 .....	.....do	7, 20
453.4875	Mobile	22
453.500	Base or mobile	7
453.50625 .....	.....do	7, 20
453.51250 .....	.....do	7, 16
453.51875 .....	.....do	7, 20
453.5375	Mobile	22
453.550	Base or mobile	7
453.55625 .....	.....do	7, 20
453.56250 .....	.....do	7, 16
453.56875 .....	.....do	7, 20
453.5875	Mobile	22
453.600	Base or mobile	7
453.60625 .....	.....do	7, 20
453.61250 .....	.....do	7, 16
453.61875 .....	.....do	7, 20
453.6375	Mobile	22
453.650	Base or mobile	7
453.65625 .....	.....do	7, 20
453.66250 .....	.....do	7, 16
453.66875 .....	.....do	7, 20
453.6875	Mobile	22
453.700	Base or mobile	7
453.70625 .....	.....do	7, 20
453.71250 .....	.....do	7, 16
453.71875 .....	.....do	7, 20
453.7375	Mobile	22
453.750	Base or mobile	7
453.75625 .....	.....do	7, 20
453.76250 .....	.....do	7, 16
453.76875 .....	.....do	7, 20
453.7875	Mobile	22
453.800	Base or mobile	7
453.80625 .....	.....do	7, 20
453.81250 .....	.....do	7, 16
453.81875 .....	.....do	7, 20
453.8375	Mobile	7, 22
453.850	Base or mobile	7
453.85625 .....	.....do	7, 20
453.86250 .....	.....do	7, 16
453.86875 .....	.....do	7, 20
453.8875	Mobile	22
453.900	Base or mobile	7
453.90625 .....	.....do	7, 20
453.91250 .....	.....do	7, 16
453.91875 .....	.....do	7, 20
453.9375	Mobile	22
453.950	Base or mobile	7
453.95625 .....	.....do	7, 20
453.96250 .....	.....do	7, 16
453.96875do	7, 20
458.0375	Mobile	22
458.050do	7
458.05625do	7, 20
458.06250do	7, 16

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FIRE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
458.06875	.....do	7, 20
458.0875	.....do	22
458.100	.....do	7
458.10625	.....do	7, 20
458.11250	.....do	7, 16
458.11875	.....do	7, 20
458.1375	.....do	22
458.150	.....do	7
458.15625	.....do	7, 20
458.16250	.....do	7, 16
458.16875	.....do	7, 20
458.1875	.....do	22
458.200	.....do	7
458.20625	.....do	7, 20
458.21250	.....do	7, 16
458.21875	.....do	7, 20
458.2375	.....do	22
458.250	.....do	7
458.25625	.....do	7, 20
458.26250	.....do	7, 16
458.26875	.....do	7, 20
458.2875	.....do	22
458.300	.....do	7
458.30625	.....do	7, 20
458.31250	.....do	7, 16
458.31875	.....do	7, 20
458.3375	.....do	22
458.350	.....do	7
458.35625	.....do	7, 20
458.36250	.....do	7, 16
458.36875	.....do	7, 20
458.3875	.....do	22
458.400	.....do	7
458.40625	.....do	7, 20
458.41250	.....do	7, 16
458.41875	.....do	7, 20
458.4375	.....do	22
458.450	.....do	7
458.45625	.....do	7, 20
458.46250	.....do	7, 16
458.46875	.....do	7, 20
458.4875	.....do	22
458.500	.....do	7
458.50625	.....do	7, 20
458.51250	.....do	7, 16
458.51875	.....do	7, 20
458.5375	.....do	22
458.550	.....do	7
458.55625	.....do	7, 20
458.56250	.....do	7, 16
458.56875	.....do	7, 20
458.5875	.....do	22
458.600	.....do	7
458.60625	.....do	7, 20
458.61250	.....do	7, 16
458.61875	.....do	7, 20
458.6375	.....do	22
458.650	.....do	7
458.65625	.....do	7, 20
458.66250	.....do	7, 16
458.66875	.....do	7, 20
458.6875	.....do	22
458.700	.....do	7
458.70625	.....do	7, 20
458.71250	.....do	7, 16
458.71875	.....do	7, 20
458.7375	.....do	22
458.750	.....do	7
458.75625	.....do	7, 20
458.76250	.....do	7, 16
458.76875	.....do	7, 20
458.7875	.....do	22
458.800	.....do	7
458.80625	.....do	7, 20
458.81250	.....do	7, 16
458.81875	.....do	7, 20
458.8375	.....do	22
458.850	.....do	7
458.85625	.....do	7, 20
458.86250	.....do	7, 16
458.86875	.....do	7, 20
458.8875	.....do	22
458.900	.....do	7
458.90625	.....do	7, 20

FIRE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
458.91250	.....do	7, 16
458.91875	.....do	7, 20
458.9375	.....do	22
458.950	.....do	7
458.95625	.....do	7, 20
458.96250	.....do	7, 16
458.96875	.....do	7, 20
460.5125	Mobile	22
460.525	Base or mobile	8
460.53125	.....do	8, 20
460.53750	.....do	8, 16
460.54375	.....do	8, 20
460.550	.....do	8
460.55625	.....do	8, 20
460.56250	.....do	8, 16
460.56875	.....do	8, 20
460.575	.....do	.....
460.58125	.....do	20
460.58750	.....do	16
460.59375	.....do	20
460.600	.....do	.....
460.60625	.....do	20
460.61250	.....do	16
460.61875	.....do	20
460.625	.....do	.....
460.63125	.....do	20
460.63750	.....do	16
460.64375	.....do	20
465.5125	Mobile	22
465.525	.....do	8
465.53125	.....do	8, 20
465.53750	.....do	8, 16
465.54375	.....do	8, 20
465.550	.....do	8
465.55625	.....do	8, 20
465.56250	.....do	8, 16
465.56875	.....do	8, 20
465.575	.....do	.....
465.58125	.....do	20
465.58750	.....do	16
465.59375	.....do	20
465.600	.....do	.....
465.60625	.....do	20
465.61250	.....do	16
465.61875	.....do	20
465.625	.....do	.....
465.63125	.....do	20
465.63750	.....do	16
465.64375	.....do	20
470–512	Base or mobile	9
806–824	Mobile	10
851–869	Base or mobile	10
928 and above	Operational fixed	11
929–930	Base only	15
1427 to 1435	Operational fixed, base or mobile	12
2450 to 2500	Base or mobile	13
10,550 to 10,680*	.....do	.....

* The frequencies in the band 10.55–1068 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) The maximum output power of any transmitter authorized to operate on this frequency shall not exceed 10 watts.

(2) This frequency is reserved for assignment to stations in this service for intersystem operations only and these operations must be primarily base-mobile communications.

(3) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(4) This frequency is not available for assignment to stations in this service in Puerto Rico or the Virgin Islands.

(5) This frequency may be assigned to stations in the Fire Radio Service, only at points within 240 km. (150 mi.) of New York, NY.

(6) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(7) This frequency is available in this service on a shared basis with all other Public-Safety Radio Services.

(8) This frequency is shared with the Police and Emergency Medical Radio Services.

(9) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(10) Subpart S contains rules for assignment of frequencies in the 806–824 MHz and 851–869 MHz bands.

(11) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(12) This frequency band is available to stations in this service subject to the provisions of §90.259.

(13) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new stations or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(14) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(15) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(16) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(17) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(18) The maximum output power of any transmitter authorized to operate on this frequency shall not exceed 100 watts. Stations authorized prior to July 15, 1992 for fixed operations will be permitted to continue such operations, but at a maximum transmitter power output of 10 watts.

(19) This frequency is available to the Fire Radio Service for fire call box operations on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, and Fire Radio Services and interservice coordi-

nation is required. All communications on this frequency must be conducted with persons or organizations charged with specific fire protection responsibility. All operations on this frequency are subject to the provisions of §90.257(b).

(20) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(21) Assignment of frequencies in this band are subject to the provisions of §90.173.

(22) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(23) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also §90.253.)

(1) Substitution of frequencies available below 25 MHz may be made in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 39.99 to 40.00 MHz and 42.00 to 42.01 MHz, are available for assignment for developmental operation subject to the provisions of subpart Q.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only two frequencies or pairs of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with the operation of mobile repeaters in accordance with §90.247, notwithstanding this limitation.

(2) The assignment of an additional frequency or frequencies may be authorized notwithstanding this limitation for common, intra-county, intra-fire-district, or intrastate fire coordination operations. The frequency or frequencies requested must be in accordance with a frequency utilization plan,

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for the area involved, on file with the Commission.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(4) A licensee of a radio station in this service may operate radio units for the purpose of determining distance, direction, speed, or position by means of a radiolocation device on any frequency available for radiolocation purposes without specific authorization from the Commission, provided type accepted equipment or equipment authorized pursuant to §90.203(b) (4) and (5) is used and all other rule requirements are satisfied.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307; secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3))

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.21, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§90.23 Highway Maintenance Radio Service.

(a) *Eligibility.* Any territory, possession, State, county, city, town, and similar governmental entity is eligible to hold authorizations in the Highway Maintenance Radio Service to operate stations for transmission of communications essential to official highway activities of the licensee.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Highway Maintenance Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

Frequency or band	Class of station(s)	Limitations
Megahertz		
33.02	Base or mobile	1
33.06 .....	.....do	1
33.10 .....	.....do	1
37.90 .....	.....do	1
37.92 .....	.....do	1
37.94 .....	.....do	1
37.96 .....	.....do	1
37.98 .....	.....do	1
45.68 .....	.....do	1
45.72 .....	.....do	1
45.76 .....	.....do	1
45.80 .....	.....do	1
45.84 .....	.....do	1
47.02 .....	.....do	2, 17
47.04 .....	.....do	2, 17
47.06 .....	.....do	2, 17
47.08 .....	.....do	2, 17

HIGHWAY MAINTENANCE RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
47.10 .....	.....do	2, 17
47.12 .....	.....do	2, 17
47.14 .....	.....do	2, 17
47.16 .....	.....do	2, 17
47.18 .....	.....do	2, 17
47.20 .....	.....do	2, 17
47.22 .....	.....do	2, 17
47.24 .....	.....do	2, 17
47.26 .....	.....do	2, 17
47.28 .....	.....do	2, 17
47.30 .....	.....do	2, 17
47.32 .....	.....do	2, 17
47.34 .....	.....do	2, 17
47.36 .....	.....do	2, 17
47.38 .....	.....do	2, 17
47.40 .....	.....do	2, 17
72.00 to 76.00	Operational fixed	3
150 to 170	Base or mobile	21, 24
150.995 .....	.....do	4
151.0025 .....	.....do	4, 18
151.010 .....	.....do	4
151.0175 .....	.....do	4, 18
151.025 .....	.....do	4
151.0325 .....	.....do	4, 18
151.040 .....	.....do	4
151.0475 .....	.....do	4, 18
151.055 .....	.....do	4
151.070 .....	.....do	4, 22
151.085 .....	.....do	4
151.0925 .....	.....do	4, 18
151.100 .....	.....do	4
151.1075 .....	.....do	4, 18
151.115 .....	.....do	4
151.1225 .....	.....do	4, 18
151.130 .....	.....do	4
151.1375 .....	.....do	4, 18
156.045	Mobile	14
156.0525 .....	.....do	14, 18
156.060 .....	.....do	14
156.0675 .....	.....do	14, 18
156.075 .....	.....do	18
156.0825 .....	.....do	18
156.105	Base or mobile	18
156.1125 .....	.....do	18
156.120 .....	.....do	18
156.1275 .....	.....do	18
156.135 .....	.....do	18
156.1425 .....	.....do	18
156.165 .....	.....do	5, 14
156.1725 .....	.....do	5, 14, 18
156.180 .....	.....do	5, 14
156.1875 .....	.....do	5, 14, 18
156.195 .....	.....do	5
156.2025 .....	.....do	5, 18
156.225 .....	.....do	5
156.2325 .....	.....do	5, 18
156.240 .....	.....do	5
156.2475 .....	.....do	5, 20
158.985	Mobile	5
158.9925 .....	.....do	5, 18
159.000 .....	.....do	5
159.0075 .....	.....do	5, 18
159.015 .....	.....do	5
159.0225 .....	.....do	5, 18
159.045 .....	.....do	5
159.0525 .....	.....do	5, 18
159.060 .....	.....do	5
159.0675 .....	.....do	5, 18
159.075 .....	.....do	5
159.0825 .....	.....do	5, 18
159.105	Base or mobile	5
159.1125 .....	.....do	5, 18
159.120 .....	.....do	5
159.1275 .....	.....do	5, 18
159.135 .....	.....do	5
159.1425 .....	.....do	5, 18
159.165 .....	.....do	5
159.1725do	5, 18
159.180do	18
159.1875do	18
159.195do	18
159.2025do	18
169–172	Mobile	15

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HIGHWAY MAINTENANCE RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
220–222	Base and mobile	19
450–470	Fixed, base, or mobile	7, 21
453.0375	Mobile	23
453.050	Base or mobile	8
453.05625 .....	.....do	8, 20
453.06250 .....	.....do	8, 18
453.06875 .....	.....do	8, 20
453.0875	Mobile	23
453.100	Base or mobile	8
453.10625 .....	.....do	8, 20
453.11250 .....	.....do	8, 18
453.11875 .....	.....do	8, 20
453.1375	Mobile	23
453.150	Base or mobile	8
453.15625 .....	.....do	8, 20
453.16250 .....	.....do	8, 18
453.16875 .....	.....do	8, 20
453.1875	Mobile	23
453.200	Base or mobile	8
453.20625 .....	.....do	8, 20
453.21250 .....	.....do	8, 18
453.21875 .....	.....do	8, 20
453.2375	Mobile	23
453.250	Base or mobile	8
453.25625 .....	.....do	8, 20
453.26250 .....	.....do	8, 18
453.26875 .....	.....do	8, 20
453.2875	Mobile	23
453.300	Base or mobile	8
453.30625 .....	.....do	8, 20
453.31250 .....	.....do	8, 18
453.31875 .....	.....do	8, 20
453.3375	Mobile	23
453.350	Base or mobile	8
453.35625 .....	.....do	8, 20
453.36250 .....	.....do	8, 18
453.36875 .....	.....do	8, 20
453.3875	Mobile	23
453.400	Base or mobile	8
453.40625 .....	.....do	8, 20
453.41250 .....	.....do	8, 18
453.41875 .....	.....do	8, 20
453.4375	Mobile	23
453.450	Base or mobile	8
453.45625 .....	.....do	8, 20
453.46250 .....	.....do	8, 18
453.46875 .....	.....do	8, 20
453.4875	Mobile	23
453.500	Base or mobile	8
453.50625 .....	.....do	8, 20
453.51250 .....	.....do	8, 18
453.51875 .....	.....do	8, 20
453.5375	Mobile	23
453.550	Base or mobile	8
453.55625 .....	.....do	8, 20
453.56250 .....	.....do	8, 18
453.56875 .....	.....do	8, 20
453.5875	Mobile	23
453.600	Base or mobile	8
453.60625 .....	.....do	8, 20
453.61250 .....	.....do	8, 18
453.61875 .....	.....do	8, 20
453.6375	Mobile	23
453.650	Base or mobile	8
453.65625 .....	.....do	8, 20
453.66250 .....	.....do	8, 18
453.66875 .....	.....do	8, 20
453.6875	Mobile	23
453.700	Base or mobile	9
453.70625 .....	.....do	9, 20
453.71250 .....	.....do	9, 18
453.71875 .....	.....do	9, 20
453.7375	Mobile	23
453.750	Base or mobile	8
453.75625 .....	.....do	8, 20
453.76250 .....	.....do	8, 18
453.76875 .....	.....do	8, 20
453.7875	Mobile	23
453.800	Base or mobile	8
453.80625 .....	.....do	8, 20
453.81250 .....	.....do	8, 18
453.81875 .....	.....do	8, 20
453.8375	Mobile	23

HIGHWAY MAINTENANCE RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
453.850	Base or mobile	8
453.85625 .....	.....do	8, 20
453.86250 .....	.....do	8, 18
453.86875 .....	.....do	8, 20
453.8875	Mobile	23
453.900	Base or mobile	8
453.90625 .....	.....do	8, 20
453.91250 .....	.....do	8, 18
453.91875 .....	.....do	8, 20
453.9375	Mobile	23
453.950	Base or mobile	8
453.95625 .....	.....do	8, 20
453.96250 .....	.....do	8, 18
453.96875 .....	.....do	8, 20
458.0375	Mobile	23
458.050 .....	.....do	8
458.05625 .....	.....do	8, 20
458.06250 .....	.....do	8, 18
458.06875 .....	.....do	8, 20
458.0875 .....	.....do	23
458.100 .....	.....do	8
458.10625 .....	.....do	8, 20
458.11250 .....	.....do	8, 18
458.11875 .....	.....do	8, 20
458.1375 .....	.....do	23
458.150 .....	.....do	8
458.15625 .....	.....do	8, 20
458.16250 .....	.....do	8, 18
458.16875 .....	.....do	8, 20
458.1875 .....	.....do	23
458.200 .....	.....do	8
458.20625 .....	.....do	8, 20
458.21250 .....	.....do	8, 18
458.21875 .....	.....do	8, 20
458.2375 .....	.....do	23
458.250 .....	.....do	8
458.25625 .....	.....do	8, 20
458.26250 .....	.....do	8, 18
458.26875 .....	.....do	8, 20
458.2875 .....	.....do	23
458.300 .....	.....do	8
458.30625 .....	.....do	8, 20
458.31250 .....	.....do	8, 18
458.31875 .....	.....do	8, 20
458.3375 .....	.....do	23
458.350 .....	.....do	8
458.35625 .....	.....do	8, 20
458.36250 .....	.....do	8, 18
458.36875 .....	.....do	8, 20
458.3875 .....	.....do	23
458.400 .....	.....do	8
458.40625 .....	.....do	8, 20
458.41250 .....	.....do	8, 18
458.41875 .....	.....do	8, 20
458.4375 .....	.....do	23
458.450 .....	.....do	8
458.45625 .....	.....do	8, 20
458.46250 .....	.....do	8, 18
458.46875 .....	.....do	8, 20
458.4875 .....	.....do	23
458.500 .....	.....do	8
458.50625 .....	.....do	8, 20
458.51250 .....	.....do	8, 18
458.51875 .....	.....do	8, 20
458.5375 .....	.....do	23
458.550 .....	.....do	8
458.55625 .....	.....do	8, 20
458.56250 .....	.....do	8, 18
458.56875 .....	.....do	8, 20
458.5875 .....	.....do	23
458.600 .....	.....do	8
458.60625 .....	.....do	8, 20
458.61250 .....	.....do	8, 18
458.61875 .....	.....do	8, 20
458.6375 .....	.....do	23
458.650 .....	.....do	8
458.65625 .....	.....do	8, 20
458.66250 .....	.....do	8, 18
458.66875 .....	.....do	8, 20
458.6875 .....	.....do	23
458.700 .....	.....do	8
458.70625 .....	.....do	8, 20
458.71250 .....	.....do	8, 18

HIGHWAY MAINTENANCE RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
458.71875 .....	.....do	8, 20
458.7375 .....	.....do	23
458.750 .....	.....do	8
458.75625 .....	.....do	8, 20
458.76250 .....	.....do	8, 18
458.76875 .....	.....do	8, 20
458.7875 .....	.....do	23
458.800 .....	.....do	8
458.80625 .....	.....do	8, 20
458.81250 .....	.....do	8, 18
458.81875 .....	.....do	8, 20
458.8375 .....	.....do	23
458.850 .....	.....do	8
458.85625 .....	.....do	8, 20
458.86250 .....	.....do	8, 18
458.86875 .....	.....do	8, 20
458.8875 .....	.....do	23
458.900 .....	.....do	8
458.90625 .....	.....do	8, 20
458.91250 .....	.....do	8, 18
458.91875 .....	.....do	8, 20
458.9375 .....	.....do	23
458.950 .....	.....do	8
458.95625 .....	.....do	8, 20
458.96250 .....	.....do	8, 18
458.96875 .....	.....do	8, 20
470–512	Base or mobile	9
806–824	Mobile	10
851–869	Base or mobile	10
928 and above	Operational-fixed	11
929–930	Base only	16
1427–1435	Operational fixed, base or mobile	12
2450–2500	Base or mobile	13
10,550 to 10,680* .....	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) This frequency is shared with the Special Emergency Radio Service.

(2) This frequency will be assigned only in accordance with a geographical assignment plan and is reserved primarily for assignment to Highway Maintenance systems operated by states. The use of this frequency by other Highway maintenance licensees will be authorized only where such use is necessary to coordinate activities with the particular state to which the frequency is assigned. Any request for such use must be supported by a statement from the state concerned.

(3) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies, are shared with other services and are available only in accordance with the provisions of §90.257.

(4) This frequency is not available for assignment to stations in the Highway Maintenance Radio Service located in Puerto Rico and the Virgin Islands.

(5) This frequency is reserved for assignment for use in highway maintenance systems operated by licensees other than States.

(6) This frequency is only assigned to Highway Maintenance stations licensed for its use prior to April 28, 1952. Such use may con-

tinue on a secondary basis to any government or non-government radio operation.

(7) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(8) This frequency is available in this service on a shared basis with all other Public-Safety Radio Services.

(9) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(10) Subpart S contains rules for assignment of frequencies in the 806–824 MHz and 851–869 MHz bands.

(11) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(12) This frequency band is available to stations in this service subject to the provisions of §90.259.

(13) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(14) This frequency may not be assigned within 161 km (100 miles) of New Orleans (coordinates 29–56–53 N and 90–04–10 W).

(15) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(16) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(17) Notwithstanding the provisions of limitation (2) above, this frequency may be used by licensees in any of the Public Safety Radio Services without a separate license for the purpose of operating self-powered vehicle detectors for traffic control and safety purposes, on a secondary basis, in accordance with §90.269 of this chapter.

(18) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(19) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(20) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(21) Assignment of frequencies in this band are subject to the provisions of §90.173.

(22) This frequency will be authorized a channel bandwidth of 25 kHz.

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(23) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(24) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also §90.253.)

(1) [Reserved]

(2) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 39.99 to 40.00 MHz and 42.00 to 42.01 MHz are available for assignment for developmental operation subject to the provisions of subpart Q.

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only two frequencies or pairs of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with the operation of mobile repeaters in accordance with §90.247, notwithstanding this limitation.

(2) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(3) A licensee of a radio station in this service may operate radio units for the purpose of determining distance, direction, speed, or position by means of a radiolocation device on any frequency available for radiolocation purposes without specific authorization from the Commission, provided type accepted equipment or equipment authorized pursuant to §90.203(b)(4) and (5) is used and all other rule requirements are satisfied.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the

Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.23, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§90.25 Forestry-Conservation Radio Service.

(a) *Eligibility.* Any territory, possession, State, county, city, town, and similar governmental entity, or persons or organizations charged with specific forestry-conservation activities are eligible to hold authorizations in the Forestry-Conservation Radio Service to operate radio stations for transmission of communications essential to official forestry-conservation activities of the licensee. Application from persons or organizations other than governmental entities must be accompanied by a statement from the governmental entity having legal jurisdiction over the area to be served, supporting the request.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Forestry-Conservation Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

FORESTRY-CONSERVATION RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
2212	Base or mobile	1
2226 .....	.....do	1
2236 .....	.....do	1
2244 .....	.....do	1
Megahertz		
30.86 .....	.....do	2
30.90 .....	.....do	2
30.94 .....	.....do	2
30.98 .....	.....do	2
31.02 .....	.....do	2
31.06 .....	.....do	2, 3, 4
31.10 .....	.....do	2, 3, 4
31.14 .....	.....do	2, 3, 4
31.18 .....	.....do	3, 4
31.22 .....	.....do	3, 4
31.26 .....	.....do	3, 4
31.30 .....	.....do	3, 4
31.34 .....	.....do	3, 4
31.38 .....	.....do	3, 4
31.42 .....	.....do	3, 4
31.46 .....	.....do	3, 4
31.50 .....	.....do	3, 4
31.54 .....	.....do	3, 4
31.58 .....	.....do	3, 4
31.62 .....	.....do	3, 4
31.66 .....	.....do	3, 4
31.70 .....	.....do	3, 4
31.74do	3, 4
31.78do	3, 4
31.82do	3, 4
31.86do	3, 4
31.90do	3, 4
31.94do	3, 4
31.98do	3, 4
44.64do	

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FORESTRY-CONSERVATION RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
44.68 .....	.....do .....	.....
44.72 .....	.....do .....	.....
44.76 .....	.....do .....	.....
44.80 .....	.....do .....	.....
44.84 .....	.....do .....	.....
44.88 .....	.....do .....	.....
44.92 .....	.....do .....	.....
44.96 .....	.....do .....	.....
45.00 .....	.....do .....	.....
45.04 .....	.....do .....	.....
72.00 to 76.00	Operational fixed	5
150 to 170	Base or mobile	25, 28
151.145 .....	.....do	6
151.1525 .....	.....do	6, 22
151.160 .....	.....do	6
151.1675 .....	.....do	6, 22
151.175 .....	.....do	6
151.190 .....	.....do	6, 26
151.205 .....	.....do	6
151.2125 .....	.....do	6, 22
151.220 .....	.....do	6
151.2275 .....	.....do	6, 22
151.235 .....	.....do	6
151.2425 .....	.....do	6, 22
151.250 .....	.....do	6
151.2575 .....	.....do	6, 22
151.265 .....	.....do	6
151.2725 .....	.....do	6, 22
151.280 .....	.....do	6
151.2875 .....	.....do	6, 22
151.295 .....	.....do	6
151.310 .....	.....do	6, 26
151.325 .....	.....do	6
151.3325 .....	.....do	6, 22
151.340 .....	.....do	6
151.3475 .....	.....do	6, 22
151.355 .....	.....do	6
151.3625 .....	.....do	6, 22
151.370 .....	.....do	6
151.3775 .....	.....do	6, 22
151.385 .....	.....do	6
151.3925 .....	.....do	6, 22
151.400 .....	.....do	6
151.4075 .....	.....do	6, 22
151.415 .....	.....do	6
151.4225 .....	.....do	6, 22
151.430 .....	.....do	6
151.4375 .....	.....do	6, 22
151.445 .....	.....do	6
151.4525 .....	.....do	6, 22
151.460 .....	.....do	6
151.4675 .....	.....do	6, 22
151.475 .....	.....do	6
151.4825 .....	.....do	6, 22
151.490 .....	.....do	6, 7
151.4975 .....	.....do	6, 7, 22
159.225 .....	.....do .....	.....
159.2325 .....	.....do	22
159.240 .....	.....do	8
159.2475 .....	.....do	8, 22
159.255 .....	.....do	8
159.2625 .....	.....do	8, 22
159.270 .....	.....do	8
159.2775 .....	.....do	8, 22
159.285 .....	.....do	8
159.2925 .....	.....do	8, 22
159.300 .....	.....do	8
159.3075 .....	.....do	8, 22
159.315 .....	.....do	8
159.3225 .....	.....do	8, 22
159.330 .....	.....do	8
159.3375 .....	.....do	8, 22
159.345 .....	.....do	8
159.3525 .....	.....do	8, 22
159.360 .....	.....do	8
159.3675 .....	.....do	8, 22
159.375 .....	.....do	8
159.3825 .....	.....do	8, 22
159.390 .....	.....do	8
159.3975 .....	.....do	8, 22
159.405 .....	.....do	8
159.4125 .....	.....do	8, 22
159.420 .....	.....do	8

FORESTRY-CONSERVATION RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
159.4275 .....	.....do	8, 22
159.435 .....	.....do	8
159.4425 .....	.....do	8, 22
159.450 .....	.....do .....	.....
159.4575 .....	.....do	22
159.465 .....	.....do .....	.....
159.4725 .....	.....do	22
169–172	Mobile	20
170.425	Base or mobile	4, 9, 10
170.475 .....	.....do	4, 9, 11
170.575 .....	.....do	4, 9, 10
171.425 .....	.....do	4, 9, 11
171.475 .....	.....do	4, 10, 12
171.575 .....	.....do	4, 9, 11
172.225 .....	.....do	4, 9, 10
172.275 .....	.....do	4, 11, 12
172.375 .....	.....do	4, 9, 10
220–222	Base and mobile	23
450–470	Fixed, base or mobile	13, 25
453.0375	Mobile	27
453.050	Base or mobile	14
453.05625 .....	.....do	14, 24
453.06250 .....	.....do	14, 22
453.06875 .....	.....do	14, 24
453.0875	Mobile	27
453.100	Base or mobile	14
453.10625 .....	.....do	14, 24
453.11250 .....	.....do	14, 22
453.11875 .....	.....do	14, 24
453.1375	Mobile	27
453.150	Based or mobile	14
453.15625 .....	.....do	14, 24
453.16250 .....	.....do	14, 22
453.16875 .....	.....do	14, 24
453.1875	Mobile	27
453.200	Base or mobile	14
453.20625 .....	.....do	14, 24
453.21250 .....	.....do	14, 22
453.21875 .....	.....do	14, 24
453.2375	Mobile	27
453.250	Base or mobile	14
453.25625 .....	.....do	14, 24
453.26250 .....	.....do	14, 22
453.26875 .....	.....do	14, 24
453.2875	Mobile	27
453.300	Base or mobile	14
453.30625 .....	.....do	14, 24
453.31250 .....	.....do	14, 22
453.31875 .....	.....do	14, 24
453.3375	Mobile	27
453.350	Base or mobile	14
453.35625 .....	.....do	14, 24
453.36250 .....	.....do	14, 22
453.36875 .....	.....do	14, 24
453.3875	Mobile	27
453.400	Base or mobile	14
453.40625 .....	.....do	14, 24
453.41250 .....	.....do	14, 22
453.41875 .....	.....do	14, 24
453.4375	Mobile	27
453.450	Base or mobile	14
453.45625 .....	.....do	14, 24
453.46250 .....	.....do	14, 22
453.46875 .....	.....do	14, 24
453.4875	Mobile	27
453.500	Base or mobile	14
453.50625 .....	.....do	14, 24
453.51250 .....	.....do	14, 22
453.51875 .....	.....do	14, 24
453.5375	Mobile	27
453.550	Base or mobile	14
453.55625 .....	.....do	14, 24
453.56250 .....	.....do	14, 22
453.56875 .....	.....do	14, 24
453.5875	Mobile	27
453.600	Base or mobile	14
453.60625 .....	.....do	14, 24
453.61250 .....	.....do	14, 22
453.61875 .....	.....do	14, 24
453.6375	Mobile	27
453.650	Base or mobile	14
453.65625do	14, 24
453.66250do	14, 22

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FORESTRY-CONSERVATION RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
453.66875	.....do	14, 24
453.6875	Mobile	27
453.700	Base or mobile	14
453.70625	.....do	14, 24
453.71250	.....do	14, 22
453.71875	.....do	14, 24
453.7375	Mobile	27
453.750	Base or mobile	14
453.75625	.....do	14, 24
453.76250	.....do	14, 22
453.76875	.....do	14, 24
453.7875	Mobile	27
453.800	Base or mobile	14
453.80625	.....do	14, 24
453.81250	.....do	14, 22
453.81875	.....do	14, 24
453.8375	Mobile	27
453.850	Base or mobile	14
453.85625	.....do	14, 24
453.86250	.....do	14, 22
453.86875	.....do	14, 24
453.8875	Mobile	27
453.900	Base or mobile	14
453.90625	.....do	14, 24
453.91250	.....do	14, 22
453.91875	.....do	14, 24
453.9375	Mobile	27
453.950	Base or mobile	14
453.95625	.....do	14, 24
453.96250	.....do	14, 22
453.96875	.....do	14, 24
458.0375	Mobile	27
458.050	.....do	14
458.05625	.....do	14, 24
458.06250	.....do	14, 22
458.06875	.....do	14, 24
458.0875	.....do	27
458.100	.....do	14
458.10625	.....do	14, 24
458.11250	.....do	14, 22
458.11875	.....do	14, 24
458.1375	.....do	27
458.150	.....do	14
458.15625	.....do	14, 24
458.16250	.....do	14, 22
458.16875	.....do	14, 24
458.1875	.....do	27
458.200	.....do	14
458.20625	.....do	14, 24
458.21250	.....do	14, 22
458.21875	.....do	14, 24
458.2375	.....do	27
458.250	.....do	14
458.25625	.....do	14, 24
458.26250	.....do	14, 22
458.26875	.....do	14, 24
458.2875	.....do	27
458.300	.....do	14
458.30625	.....do	14, 24
458.31250	.....do	14, 22
458.31875	.....do	14, 24
458.3375	.....do	27
458.350	.....do	14
458.35625	.....do	14, 24
458.36250	.....do	14, 22
458.36875	.....do	14, 24
458.3875	.....do	27
458.400	.....do	14
458.40625	.....do	14, 24
458.41250	.....do	14, 22
458.41875	.....do	14, 24
458.4375	.....do	27
458.450	.....do	14
458.45625	.....do	14, 24
458.46250	.....do	14, 22
458.46875	.....do	14, 24
458.4875	.....do	27
458.500	.....do	14
458.50625	.....do	14, 24
458.51250	.....do	14, 22
458.51875	.....do	14, 24
458.5375	.....do	27
458.550	.....do	14

FORESTRY-CONSERVATION RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
458.55625	.....do	14, 24
458.56250	.....do	14, 22
458.56875	.....do	14, 24
458.5875	.....do	27
458.600	.....do	14
458.60625	.....do	14, 24
458.61250	.....do	14, 22
458.61875	.....do	14, 24
458.6375	.....do	27
458.650	.....do	14
458.65625	.....do	14, 24
458.66250	.....do	14, 22
458.66875	.....do	14, 24
458.6875	.....do	27
458.700	.....do	14
458.70625	.....do	14, 24
458.71250	.....do	14, 22
458.71875	.....do	14, 24
458.7375	.....do	27
458.750	.....do	14
458.75625	.....do	14, 24
458.76250	.....do	14, 22
458.76875	.....do	14, 24
458.7875	.....do	27
458.800	.....do	14
458.80625	.....do	14, 24
458.81250	.....do	14, 22
458.81875	.....do	14, 24
458.8375	.....do	27
458.850	.....do	14
458.85625	.....do	14, 24
458.86250	.....do	14, 22
458.86875	.....do	14, 24
458.8875	.....do	27
458.900	.....do	14
458.90625	.....do	14, 24
458.91250	.....do	14, 22
458.91875	.....do	14, 24
458.9375	.....do	27
458.950	.....do	14
458.95625	.....do	14, 24
458.96250	.....do	14, 22
458.96875	.....do	14, 24
470 to 512	Base or mobile	15
806 to 824	Mobile	16
851 to 869	Base or Mobile	16
928 and above	Operational fixed	17
929 to 930	Base only	21
1427 to 1435	Operational fixed, base or mobile	18
2450 to 2500	Base or mobile	19
10,550 to 10,680*	.....do	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) The use of this frequency is on a secondary basis to any Canadian station.

(2) This frequency is shared with the Motor Carrier Radio Service.

(3) This frequency is available for assignment only in accordance with a geographical assignment plan. This frequency may be used for conservation activities on a secondary basis to any station using the frequency for forest fire prevention, detection, and suppression.

(4) This frequency is reserved primarily for assignment to state licensees. Assignments to other licensees will be made only where the frequency is required for coordinated operation with the State system to which the frequency is assigned. Any request for such

assignment must be supported by a statement from the State system concerned, indicating that the assignment is necessary for coordination of activities.

(5) The frequencies available for use at operational-fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(6) This frequency is not available for assignment to stations in this service located in Puerto Rico or the Virgin Islands.

(7) This frequency is shared with stations in the Special Industrial Radio Service and evidence of interservice coordination is required.

(8) This frequency is shared with the Special Industrial Radio Service in Puerto Rico and the Virgin Islands. All applications for the assignment of a new frequency or to change existing facilities in such a manner as to require frequency coordination as specified in §90.175 for stations in Puerto Rico or the Virgin Islands, shall be accompanied by evidence of interservice frequency coordination.

(9) This frequency will be assigned only to licensees directly responsible for the prevention, detection, and suppression of forest fires, on a secondary basis to any U.S. Government station.

(10) This frequency will be assigned for use only in areas west of the Mississippi River.

(11) This frequency will be assigned for use only in areas east of the Mississippi.

(12) In addition to agencies responsible for forest fire prevention, detection, and suppression, this frequency may be assigned to conservation agencies which do not have forest fire responsibilities on a secondary basis to any U.S. Government stations, *Provided*, That such assignment is necessary to permit mobile relay operation by such agencies.

(13) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(14) This frequency is available in this service on a shared basis with all other Public Safety Services.

(15) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(16) Subpart S contains rules for assignment of frequencies in the 806–824 MHz and 851–869 MHz bands.

(17) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(18) This frequency band is available to stations in this service subject to the provisions of §90.259.

(19) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new stations or modifica-

tion to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered, and their operation is co-primary with the Radiodetermination Satellite Service.

(20) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(21) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(22) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(23) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(24) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(25) Assignment of frequencies in this band are subject to the provisions of §90.173.

(26) This frequency will be authorized a channel bandwidth of 25 kHz.

(27) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(28) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also §90.253.)

(1) Substitution of frequencies available below 25 MHz may be made in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 39.99 to 40.00 MHz, and 42.00 to 42.01 MHz are available for assignment for developmental operation subject to the provisions of subpart Q.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only two frequencies or pairs of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with the operation of mobile repeaters in accordance with §90.247 notwithstanding this limitation.

(2) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(3) A licensee of a radio station in this service may operate radio units for the purpose of determining distance, direction, speed, or position by means of a radio-location device on any frequency available for radiolocation purposes without specific authorization from the Commission, provided type accepted equipment or equipment authorized pursuant to §90.203(b)(4) and (5) is used and all other rule requirements are satisfied.

(f) A licensee in the Forestry-Conservation Radio Service may use, without a specific authorization from the Commission, transmitters on the frequencies indicated below in connection with wildlife tracking and/or telemetry and in connection with official forestry-conservation activities, provided that such use shall be on a secondary basis and shall not cause harmful interference to services of other licensees operating on regularly assigned frequencies. The provisions of §§90.203, 90.425, and 90.429 of this part shall not apply to transmitters complying with this subparagraph. To be eligible for operations in this manner, the transmitter must comply with all of the following requirements.

(1) The carrier frequency shall be within the bands of:

(MHz)	
31.17 to 31.19	31.77 to 31.79
31.21 to 31.23	31.81 to 31.83
31.25 to 31.27	31.85 to 31.87
31.29 to 31.31	31.89 to 31.91
31.33 to 31.35	31.93 to 31.95
31.37 to 31.39	31.97 to 31.99
31.41 to 31.43	44.63 to 44.65
31.45 to 31.47	44.67 to 44.69
31.49 to 31.51	44.71 to 44.73
31.53 to 31.55	44.75 to 44.77
31.57 to 31.59	44.79 to 44.81
31.61 to 31.63	44.83 to 44.85
31.65 to 31.67	44.87 to 44.89
31.69 to 31.71	44.91 to 44.93
31.73 to 31.75	44.95 to 44.97

44.99 to 45.01	151.145 to 151.475
45.03 to 45.05	159.225 to 159.465

The carrier frequency must be maintained within 0.005 percent of the frequency of operation. Use on assigned channel center frequencies is not required.

(2) The emitted signal shall be non-voice modulation (A1D, A2D, F1D, or F2D emission).

(3) The maximum occupied bandwidth, containing 99 percent of the radiated power, shall not exceed 0.25 kHz.

(4) The transmitter output power shall not exceed a mean power of 5 mW nor shall any peak exceed 100 mW peak power, as measured into a permanently attached antenna; or if the transmitter and antenna combination are contained in a sealed unit, the field strength of the fundamental signal of the transmitter and antenna combination shall not exceed 0.29 V/m mean or 1.28 V/m peak when measured at a distance of 3 meters.

(5) The requirements of §90.175 regarding frequency coordination apply.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.25, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§90.27 Emergency Medical Radio Service.

(a) *Eligibility.* Persons or entities engaged in the provision of basic or advanced life support services on an ongoing basis are eligible to hold authorizations in the Emergency Medical Radio Service to operate stations for transmission of communications essential for the delivery or rendition of emergency medical services for the provision of basic or advanced life support. Applications submitted by persons or organizations (governmental or otherwise) other than the governmental body having jurisdiction over the state's emergency medical service plans must be accompanied by a statement prepared by the governmental body having jurisdiction over the state's emergency medical services plan indicating that the applicant is included in the state's emergency plan or otherwise supporting the application.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Emergency Medical Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations explained in paragraph (c) of this section. (Frequencies below 450 MHz indicated for base or mobile stations may be authorized to fixed stations on a secondary basis to stations in the mobile service):

EMERGENCY MEDICAL RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
72.00 to 76.00	Operational fixed	1
150 to 170	Base or mobile	28, 29
150.775	Mobile	
150.7825 .....	.....do	2
150.790 .....	.....do	
150.7975 .....	.....do	
150.805 .....	.....do	
155.325	Base or mobile	3, 4
155.3325 .....	.....do	2, 3, 4
155.340 .....	.....do	4, 5
155.3475 .....	.....do	2, 4, 5
155.355 .....	.....do	3, 4
155.3625 .....	.....do	2, 3, 4
155.385 .....	.....do	3, 4
155.3925 .....	.....do	2, 3, 4
155.400 .....	.....do	3, 4
155.4075 .....	.....do	2, 3, 4
169–172	Mobile	6
220.9025	Base	25
220.9075 .....	.....do	25
220.9125 .....	.....do	25
220.9175 .....	.....do	25
220.9225 .....	.....do	25
221.9025	Mobile	25
221.9075 .....	.....do	25
221.9125 .....	.....do	25
221.9175 .....	.....do	25
221.9225 .....	.....do	25
450 to 470	Fixed, base, or mobile	7, 28
453.025	Base or mobile	9, 19, 22, 26
453.03125 .....	.....do	9, 19, 22, 26, 27
453.03750 .....	.....do	2, 9, 19, 22, 26
453.04375 .....	.....do	9, 19, 22, 26, 27
453.050	Base or mobile	8
453.05625 .....	.....do	8, 27
453.06250 .....	.....do	2, 8
453.06875 .....	.....do	8, 27
453.075	Base or mobile	9, 19, 22, 26
453.08125 .....	.....do	9, 19, 22, 26, 27
453.08750 .....	.....do	2, 9, 19, 22, 26
453.09375 .....	.....do	9, 19, 22, 26, 27
453.100	Base or mobile	8
453.10625 .....	.....do	8, 27
453.11250 .....	.....do	2, 8
453.11875 .....	.....do	8, 27
453.125	Base or mobile	9, 19, 22, 26
453.13125 .....	.....do	9, 19, 22, 26, 27
453.13750 .....	.....do	2, 9, 19, 22, 26
453.14375 .....	.....do	9, 19, 22, 26, 27
453.150	Base or mobile	8
453.15625 .....	.....do	8, 27
453.16250 .....	.....do	2, 8
453.16875 .....	.....do	8, 27
453.175	Base or mobile	9, 19, 22, 26
453.18125 .....	.....do	9, 19, 22, 26, 27
453.18750 .....	.....do	2, 9, 19, 22, 26
453.19375 .....	.....do	9, 19, 22, 26, 27
453.200	Base or mobile	8
453.20625 .....	.....do	8, 27
453.21250 .....	.....do	2, 8
453.21875 .....	.....do	8, 27
453.250 .....	.....do	8
453.25625 .....	.....do	8, 27
453.26250 .....	.....do	2, 8
453.26875 .....	.....do	8, 27
453.300 .....	.....do	8
453.30625 .....	.....do	8, 27
453.31250 .....	.....do	2, 8
453.31875 .....	.....do	8, 27
453.350 .....	.....do	8
453.35625 .....	.....do	8, 27
453.36250 .....	.....do	2, 8
453.36875 .....	.....do	8, 27
453.400 .....	.....do	8
453.40625 .....	.....do	8, 27
453.41250 .....	.....do	2, 8
453.41875 .....	.....do	8, 27
453.450 .....	.....do	8
453.45625do	8, 27
453.46250do	2, 8
453.46875do	8, 27
453.500do	8
453.50625do	8, 27

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EMERGENCY MEDICAL RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
453.51250 .....	.....do	2, 8
453.51875 .....	.....do	8, 27
453.550 .....	.....do	8
453.55625 .....	.....do	8, 27
453.56250 .....	.....do	2, 8
453.56875 .....	.....do	8, 27
453.600 .....	.....do	8
453.60625 .....	.....do	8, 27
453.61250 .....	.....do	2, 8
453.61875 .....	.....do	8, 27
453.650 .....	.....do	8
453.65625 .....	.....do	8, 27
453.66250 .....	.....do	2, 8
453.66875 .....	.....do	8, 27
453.700 .....	.....do	8
453.70625 .....	.....do	8, 27
453.71250 .....	.....do	2, 8
453.71875 .....	.....do	8, 27
453.750 .....	.....do	8
453.75625 .....	.....do	8, 27
453.76250 .....	.....do	2, 8
453.76875 .....	.....do	8, 27
453.800 .....	.....do	8
453.80625 .....	.....do	8, 27
453.81250 .....	.....do	2, 8
453.81875 .....	.....do	8, 27
453.850 .....	.....do	8
453.85625 .....	.....do	8, 27
453.86250 .....	.....do	2, 8
453.86875 .....	.....do	8, 27
453.900 .....	.....do	8
453.90625 .....	.....do	8, 27
453.91250 .....	.....do	2, 8
453.91875 .....	.....do	8, 27
453.950 .....	.....do	8
453.95625 .....	.....do	8, 27
453.96250 .....	.....do	2, 8
453.96875 .....	.....do	8, 27
458.025	Mobile	9, 22, 26
458.03125 .....	.....do	9, 22, 26, 27
458.03750 .....	.....do	2, 9, 22, 26
458.04375 .....	.....do	9, 22, 26, 27
458.050 .....	.....do	8
458.05625 .....	.....do	8, 27
458.06250 .....	.....do	2, 8
458.06875 .....	.....do	8, 27
458.075 .....	.....do	9, 22, 26
458.08125 .....	.....do	9, 22, 26, 27
458.08750 .....	.....do	2, 9, 22, 26
458.09375 .....	.....do	9, 22, 26, 27
458.100 .....	.....do	8
458.10625 .....	.....do	8, 27
458.11250 .....	.....do	2, 8
458.11875 .....	.....do	8, 27
458.125 .....	.....do	9, 22, 26
458.13125 .....	.....do	9, 22, 26, 27
458.13750 .....	.....do	2, 9, 22, 26
458.14375 .....	.....do	9, 22, 26, 27
458.150 .....	.....do	8
458.15625 .....	.....do	8, 27
458.16250 .....	.....do	2, 8
458.16875 .....	.....do	8, 27
458.175 .....	.....do	9, 22, 26
458.18125 .....	.....do	9, 22, 26, 27
458.18750 .....	.....do	2, 9, 22, 26
458.19375 .....	.....do	9, 22, 26, 27
458.200 .....	.....do	8
458.20625 .....	.....do	8, 27
458.21250 .....	.....do	2, 8
458.21875 .....	.....do	8, 27
458.250 .....	.....do	8
458.25625 .....	.....do	8, 27
458.26250 .....	.....do	2, 8
458.26875 .....	.....do	8, 27
458.300 .....	.....do	8
458.30625 .....	.....do	8, 27
458.31250 .....	.....do	2, 8
458.31875 .....	.....do	8, 27
458.350 .....	.....do	8
458.35625 .....	.....do	8, 27
458.36250 .....	.....do	2, 8
458.36875 .....	.....do	8, 27
458.400 .....	.....do	8
458.40625 .....	.....do	8, 27
458.41250 .....	.....do	2, 8

EMERGENCY MEDICAL RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
458.41875 .....	.....do	8, 27
458.450 .....	.....do	8
458.45625 .....	.....do	8, 27
458.46250 .....	.....do	2, 8
458.46875 .....	.....do	8, 27
458.500 .....	.....do	8
458.50625 .....	.....do	8, 27
458.51250 .....	.....do	2, 8
458.51875 .....	.....do	8, 27
458.550 .....	.....do	8
458.55625 .....	.....do	8, 27
458.56250 .....	.....do	2, 8
458.56875 .....	.....do	8, 27
458.600 .....	.....do	8
458.60625 .....	.....do	8, 27
458.61250 .....	.....do	2, 8
458.61875 .....	.....do	8, 27
458.650 .....	.....do	8
458.65625 .....	.....do	8, 27
458.66250 .....	.....do	2, 8
458.66875 .....	.....do	8, 27
458.700 .....	.....do	8
458.70625 .....	.....do	8, 27
458.71250 .....	.....do	2, 8
458.71875 .....	.....do	8, 27
458.750 .....	.....do	8
458.75625 .....	.....do	8, 27
458.76250 .....	.....do	2, 8
458.76875 .....	.....do	8, 27
458.800 .....	.....do	8
458.80625 .....	.....do	8, 27
458.81250 .....	.....do	2, 8
458.81875 .....	.....do	8, 27
458.850 .....	.....do	8
458.85625 .....	.....do	8, 27
458.86250 .....	.....do	2, 8
458.86875 .....	.....do	8, 27
458.900 .....	.....do	8
458.90625 .....	.....do	8, 27
458.91250 .....	.....do	2, 8
458.91875 .....	.....do	8, 27
458.950 .....	.....do	8
458.95625 .....	.....do	8, 27
458.96250 .....	.....do	2, 8
458.96875 .....	.....do	8, 27
460.525	Base or mobile	10
460.53125 .....	.....do	10, 27
460.53750 .....	.....do	2, 10
460.54375 .....	.....do	10, 27
460.550 .....	.....do	10
460.55625 .....	.....do	10, 27
460.56250 .....	.....do	2, 10
460.56875 .....	.....do	10, 27
462.950 .....	.....do	3, 11
462.95625 .....	.....do	3, 11, 27
462.96250 .....	.....do	2, 3, 11
462.96875 .....	.....do	3, 11, 27
462.975 .....	.....do	3, 11
462.98125 .....	.....do	3, 11, 27
462.98750 .....	.....do	2, 3, 11
462.99375 .....	.....do	3, 11, 27
463.000 .....	.....do	9, 13, 20
463.00625 .....	.....do	9, 13, 20, 27
463.01250 .....	.....do	2, 9, 13, 20
463.01875 .....	.....do	9, 13, 20, 27
463.025 .....	.....do	9, 13, 20
463.03125 .....	.....do	9, 13, 20, 27
463.03750 .....	.....do	2, 9, 13, 20
463.04375 .....	.....do	9, 13, 20, 27
463.050 .....	.....do	9, 13, 20
463.05625 .....	.....do	9, 13, 20, 27
463.06250 .....	.....do	2, 9, 13, 20
463.06875 .....	.....do	9, 13, 20, 27
463.075 .....	.....do	9, 13, 21
463.08125 .....	.....do	9, 13, 21, 27
463.08750 .....	.....do	2, 9, 13, 21
463.09375 .....	.....do	9, 13, 21, 27
463.100 .....	.....do	9, 13, 21
463.10625 .....	.....do	9, 13, 21, 27
463.11250 .....	.....do	2, 9, 13, 21
463.11875 .....	.....do	9, 13, 21, 27
463.125 .....	.....do	9, 13, 21
463.13125 .....	.....do	9, 13, 21, 27
463.13750 .....	.....do	2, 9, 13, 21
463.14375 .....	.....do	9, 13, 21, 27

EMERGENCY MEDICAL RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
463.150 .....	.....do	9, 13, 21
463.15625 .....	.....do	9, 13, 21, 27
463.16250 .....	.....do	2, 9, 13, 21
463.16875 .....	.....do	9, 13, 21, 27
463.175 .....	.....do	9, 13, 21
463.18125 .....	.....do	9, 13, 21, 27
463.18750 .....	.....do	2, 9, 13, 21
463.19375 .....	.....do	9, 13, 21, 27
465.525	Mobile	10
465.53125 .....	.....do	10, 27
465.53750 .....	.....do	2, 10
465.54375 .....	.....do	10, 27
465.550 .....	.....do	10
465.55625 .....	.....do	10, 27
465.56250 .....	.....do	2, 10
465.56875 .....	.....do	10, 27
467.950 .....	.....do	3, 11
467.95625 .....	.....do	3, 11, 27
467.96250 .....	.....do	2, 3, 11
467.96875 .....	.....do	3, 11, 27
467.975 .....	.....do	3, 11
467.98125 .....	.....do	3, 11, 27
467.98750 .....	.....do	2, 3, 11
467.99375 .....	.....do	3, 11, 27
468.000 .....	.....do	9, 13, 20
468.00625 .....	.....do	9, 13, 20, 27
468.01250 .....	.....do	2, 9, 13, 20
468.01875 .....	.....do	9, 13, 20, 27
468.025 .....	.....do	9, 13, 20
468.03125 .....	.....do	9, 13, 20, 27
468.03750 .....	.....do	2, 9, 13, 20
468.04375 .....	.....do	9, 13, 20, 27
468.050 .....	.....do	9, 13, 20
468.05625 .....	.....do	9, 13, 20, 27
468.06250 .....	.....do	2, 9, 13, 20
468.06875 .....	.....do	9, 13, 20, 27
468.075 .....	.....do	9, 13, 21
468.08125 .....	.....do	9, 13, 21, 27
468.08750 .....	.....do	2, 9, 13, 21
468.09375 .....	.....do	9, 13, 21, 27
468.100 .....	.....do	9, 13, 21
468.10625 .....	.....do	9, 13, 21, 27
468.11250 .....	.....do	2, 9, 13, 21
468.11875 .....	.....do	9, 13, 21, 27
468.125 .....	.....do	9, 13, 21
468.13125 .....	.....do	9, 13, 21, 27
468.13750 .....	.....do	2, 9, 13, 21
468.14375 .....	.....do	9, 13, 21, 27
468.150 .....	.....do	9, 13, 21
468.15625 .....	.....do	9, 13, 21, 27
468.16250 .....	.....do	2, 9, 13, 21
468.16875 .....	.....do	9, 13, 21, 27
468.175 .....	.....do	9, 13, 21
468.18125 .....	.....do	9, 13, 21, 27
468.18750 .....	.....do	2, 9, 13, 21
468.19375 .....	.....do	9, 13, 21, 27
470 to 512	Base or Mobile	14
806 to 824	Mobile	15
851 to 869	Base or Mobile	15
928 and above	Operational fixed	16
929 to 930	Base only	24
1427 to 1435	Operational fixed base or mobile	17
2450 to 2500	Base or Mobile	18
10,550 to 10,680 .....	.....do	23

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) The frequencies available for use at operational-fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(2) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an author-

ized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(3) A licensee regularly conducting two-way communications operations on this frequency may, on a secondary basis, also transmit one-way alert-paging signals to ambulance and rescue squad personnel.

(4) In addition to other authorized uses, the use of F1B, F1D, F2B or F2D emission is

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permitted on this frequency for the operation of biomedical telemetry systems except in the following geographic locations:

(i) New York, N.Y.-Northeastern New Jersey; Los Angeles-Long Beach, Calif.; Chicago, Ill.-Northwestern Indiana; Philadelphia, Pa.-N.J.; Detroit, Mich.; San Francisco-Oakland, Calif.; Boston, Mass.; Washington, D.C.-Md.-Va.; Cleveland, Ohio; St. Louis, Mo.-Ill.; Pittsburgh, Pa.; Minneapolis-St. Paul, Minn.; Houston, Tex.; Baltimore, Md.; Dallas, Tex.; Milwaukee, Wis.; Seattle-Everett, Wash.; Miami, Fla.; San Diego, Calif.; Atlanta, Ga.; Cincinnati, Ohio-Ky.; Kansas City, Mo.-Kans.; Buffalo, N.Y.; Denver, Colo.; San Jose, Calif.; New Orleans, La.; Phoenix, Ariz.; Portland, Oreg.-Wash.; Indianapolis, Ind.; Providence-Pawtucket-Warwick, R.I.-Mass.; Columbus, Ohio; San Antonio, Tex.; Louisville, Ky.-Ind.; Dayton, Ohio; Fort Worth, Tex.; Norfolk-Portsmouth, Va.; Memphis, Tenn.-Miss.; Sacramento, Calif.; Fort Lauderdale-Hollywood, Fla.; Rochester, N.Y.; Tampa-St. Petersburg, Fla.

(ii) The continuous carrier mode of operation may be used for telemetry transmissions on this frequency for periods up to two-minutes duration; following which there must be a break in the carrier for at least a one-minute period.

(iii) Geographical coordinates for the above-listed urbanized areas may be found at table 1 of §90.635.

(5) This frequency may be designated by common consent as an intersystem mutual assistance frequency under an area-wide medical communications plan.

(6) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(7) The frequencies available for use at fixed stations in this band and the requirements for assignment are set forth in §90.261. Operation on these frequencies is secondary to stations in the Industrial and Land Transportation Radio Service where they are assigned for land mobile operations.

(8) This frequency is available in this service on a shared basis with all other Public-Safety Radio Services.

(9) The continuous carrier mode of operation may be used for telemetry transmission on this frequency.

(10) This frequency is shared with the Police and Fire Radio Services. This frequency may be designated by common consent for intra-system and inter-system mutual assistance purposes and is subject to the coordination requirements specified in §90.175.

(11) This frequency is primarily authorized for use in the dispatch of medical care vehicles and personnel for the rendition or delivery of medical services. This frequency may also be assigned for intra-system and inter-system mutual assistance purposes. For uniformity in usage these frequency pairs may be referred to by channel name as follows:

Frequencies base and mobile (MHz)	Mobile only (MHz)	Channel name
462.950	467.950	MED-9
462.95625	467.95625	MED-91
462.9625	467.9625	MED-92
462.96875	467.96875	MED-93
462.975	467.975	MED-10
462.98125	467.98125	MED-101
462.9875	467.9875	MED-102
462.99375	467.99375	MED-103

(12) [Reserved]

(13) For applications for new radio systems received after August 15, 1974, the thirty-two frequency pairs listed in paragraph (c)(13)(i) of this section will be assigned in a block for shared operation under §90.27(a) subject to the following:

(i) For uniformity in usage, these frequency pairs may be referred to by channel name as follows:

Frequencies base and mobile (MHz)	Mobile only (MHz)	Channel name
463.000	468.000	MED-1
463.00625	468.00625	MED-11
463.0125	468.0125	MED-12
463.01875	468.01875	MED-13
463.025	468.025	MED-2
463.03125	468.03125	MED-21
463.0375	468.0375	MED-22
463.04375	468.04375	MED-23
463.050	468.050	MED-3
463.05625	468.05625	MED-31
463.0625	468.0625	MED-32
463.06875	468.06875	MED-33
46.075	46.075	MED-4
463.08125	468.08125	MED-41
463.0875	468.0875	MED-42
463.09375	468.09375	MED-43
463.100	468.100	MED-5
463.10625	468.10625	MED-51
463.1125	468.1125	MED-52
463.11875	468.11875	MED-53
463.125	468.125	MED-6
463.13125	468.13125	MED-61
463.1375	468.1375	MED-62
463.14375	468.14375	MED-63
463.150	468.150	MED-7
463.15625	468.15625	MED-71
463.1625	468.1625	MED-72
463.16875	468.16875	MED-73
463.175	468.175	MED-8
463.18125	468.18125	MED-81
463.1875	468.1875	MED-82
463.19375	468.19375	MED-83

(ii) Except as provided in paragraphs (c)(13)(iii) and (iv) of this section, mobile or portable stations must employ equipment that is both wired and equipped to transmit/receive, respectively, on each of these MED frequency pairs with transmitters operated on the 468 MHz frequencies.

(iii) Portable (hand-held) units operated with a maximum output power of 2.5 watts are exempted from the multi-channel equipment requirements specified in paragraph (c)(13)(ii) in this section.

(iv) Stations located in areas above line A, as defined in §90.7 will be required to meet multi-channel equipment requirements only for those frequencies up to the number specified in paragraph (c)(13)(ii) of this section that have been assigned and coordinated with Canada in accordance with the applicable U.S.-Canada agreement.

(14) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(15) Subpart S contains rules for assignment of frequencies in the 806–824 MHz and 851–869 MHz bands.

(16) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(17) This frequency band is available in this service subject to the provisions of §90.259.

(18) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modifications to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radio-determination Satellite Service.

(19) Paging licensees as of March 20, 1991, may continue to operate on a primary basis until January 14, 1998.

(20) This frequency is authorized for use only for operations in biomedical telemetry stations. F1B, F1D, F2B, F2D, F3E, G1B, G1D, G2B, G2D and G3E emissions may be authorized. Entities eligible in this Radio Service may use this frequency on a secondary basis for any other permissible communications consistent with §90.27(a).

(21) This frequency is authorized only for communications between medical facilities vehicles and personnel related to medical supervision and instruction for the treatment and transport of patients in the rendition or delivery of medical services. F1B, F1D, F2B, F2D, G1B, G1D, G2B, F3E and G3E emissions are authorized. Entities eligible in this Radio Service may use this frequency on a secondary basis for any other permissible communications consistent with §90.27(a).

(22) Local government highway radio call box operations first licensed prior to 3/31/80 on this frequency may continue to operate in accordance with §90.17(c)(11).

(23) This band is available for Digital Termination Systems and for associated internodal links under part 94 of this chapter. No new licenses will be issued under this subpart but current licenses will be renewed.

(24) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(25) Rules concerning the use of this frequency are set forth in subpart T.

(26) This frequency is also authorized for use for operations in biomedical telemetry stations. F1B, F1D, F2B, F2D, F3E, G1B, G1D, G2B, G2D, and G3E emissions may be authorized for bio-medical transmissions.

(27) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency

will be assigned with an authorized bandwidth not to exceed 6 kHz.

(28) Assignment of frequencies in this band are subject to the provisions of §90.173.

(29) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

[58 FR 12178, Mar. 3, 1993, as amended at 60 FR 37188, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 2034, Jan. 15, 1997]

Subpart C—Industrial/Business Radio Pool

SOURCE: 62 FR 18874, Apr. 17, 1997, unless otherwise noted.

EFFECTIVE DATE NOTE: At 62 FR 18874, Apr. 17, 1997, subpart C, formerly consisting of §§90.33–90.55, was revised, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth following the revised text.

§90.31 Scope.

The Industrial/Business Radio Pool covers the licensing of the radio communications of entities engaged in commercial activities, engaged in clergy activities, operating educational, philanthropic, or ecclesiastical institutions, or operating hospitals, clinics, or medical associations. Rules as to eligibility for licensing, frequencies available, permissible communications and classes and number of stations, and any special requirements are set forth in the following sections.

§90.33 General eligibility.

(a) In addition to the eligibility shown in the Industrial/Business Pool, eligibility is also provided for any corporation proposing to furnish nonprofit radiocommunication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary. This corporate eligibility is not subject to the cooperative use provision of §90.179.

(b) Eligibility is also provided for a nonprofit corporation or association that is organized for the purpose of furnishing a radiocommunications service to persons who meet the eligibility requirements of the Industrial/Business Pool. Such use is subject to the cooperative use provisions of §90.179.

§ 90.35 Industrial/Business Pool.

(a) *Eligibility.* Persons primarily engaged in any of the following activities are eligible to hold authorizations in the Industrial/Business Pool to provide commercial mobile radio service as defined in part 20 of this chapter or to operate stations for transmission of communications necessary to such activities of the licensee:

(1) The operation of a commercial activity;

(2) The operation of educational, philanthropic, or ecclesiastical institutions;

(3) Clergy activities; or

(4) The operation of hospitals, clinics, or medical associations.

(b) *Industrial/Business Pool frequencies.*

(1) The following table indicates frequencies available for assignment to Industrial/Business Pool stations, together with the class of station(s) to which they are normally assigned, the specific assignment limitations which are explained in paragraph (b) of this section, and the certified frequency coordinator for each frequency:

(2)(i) The letter symbol(s) listed in the Coordinator column of the frequency table in paragraph (a)(3) of this section specifies the frequency coordinator(s) for each frequency as follows:

IP—Petroleum Coordinator

IW—Power Coordinator

LR—Railroad Coordinator

(ii) Frequencies without any coordinator specified may be coordinated by any coordinator certified in the Industrial/Business Pool.

(3) *Frequencies.*

INDUSTRIAL/BUSINESS POOL FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations	Coordinator
Kilohertz			
1614	Base or mobile	1, 2, 3, 4 ..	IP
1628 .....	.....do	5.	
1652 .....	.....do	5.	
1676 .....	.....do	5.	
1700 .....	.....do	5.	
2000 to 25,000	Fixed, base or mobile.	1.	
2292	Base or mobile	5.	
2398 .....	.....do	5, 7.	
4637.5 .....	.....do	5, 7.	
Megahertz			
25.02 .....	.....do	3, 4	IP
25.04 .....	.....do	8	IP

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinator
25.06 .....	.....do	3, 4	IP
25.08 .....	.....do	8, 9	IP
25.10 .....	.....do	3, 4, 9	IP
25.12 .....	.....do .....	.....	IP
25.14 .....	.....do	3, 4	IP
25.16 .....	.....do .....	.....	IP
25.18 .....	.....do	3, 4	IP
25.20 .....	.....do .....	.....	IP
25.22 .....	.....do	4, 7	IP
25.24 .....	.....do .....	.....	IP
25.26 .....	.....do	4, 7	IP
25.28 .....	.....do .....	.....	IP
25.30 .....	.....do	4, 7	IP
25.32 .....	.....do .....	.....	IP
27.43 .....	.....do .....	.....
27.45 .....	.....do .....	.....
27.47 .....	.....do .....	.....
27.49 .....	.....do	10.	
27.51	Mobile	11.	
27.53 .....	.....do	11.	
29.71	Base or mobile	.....
29.73 .....	.....do .....	.....
29.75 .....	.....do .....	.....
29.77 .....	.....do .....	.....
29.79 .....	.....do .....	.....
30.58 .....	.....do .....	.....
30.60 .....	.....do .....	.....
30.62 .....	.....do .....	.....
30.64 .....	.....do .....	.....
30.66 .....	.....do .....	.....
30.68 .....	.....do .....	.....
30.70 .....	.....do	4, 7	IP
30.72 .....	.....do .....	.....
30.74 .....	.....do .....	.....
30.76 .....	.....do .....	.....
30.78 .....	.....do	4, 7	IP
30.80 .....	.....do .....	.....
30.82 .....	.....do .....	.....
30.84	Mobile	11, 12.	
30.86	Base or mobile	13	
30.88 .....	.....do .....	.....
30.90 .....	.....do	13.	
30.92 .....	.....do .....	.....
30.94 .....	.....do	13.	
30.96 .....	.....do .....	.....
30.98 .....	.....do	13.	
31.00 .....	.....do .....	.....
31.02 .....	.....do	13.	
31.04 .....	.....do .....	.....
31.06 .....	.....do	13.	
31.08 .....	.....do .....	.....
31.10 .....	.....do	13.	
31.12 .....	.....do .....	.....
31.14 .....	.....do	13.	
31.16 .....	.....do .....	.....
31.20 .....	.....do .....	.....
31.24 .....	.....do .....	.....
31.28 .....	.....do .....	.....
31.32 .....	.....do .....	.....
31.36 .....	.....do .....	.....
31.40do	
31.44do	
31.48do	
31.52do	
31.56do	
31.60do	
31.64do	
31.68do	
31.72do	
31.76do	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
31.80 .....	.....do.		
31.84 .....	.....do.		
31.88 .....	.....do.		
31.92 .....	.....do.		
31.96 .....	.....do.		
33.12 .....	.....do.	11.	
33.14	Mobile	11, 12.	
33.16	Base or mobile		
33.18 .....	.....do.		IP
33.20 .....	.....do.		IP
33.22 .....	.....do.		IP
33.24 .....	.....do.		IP
33.26 .....	.....do.		IP
33.28 .....	.....do.		IP
33.30 .....	.....do.		IP
33.32 .....	.....do.		IP
33.34 .....	.....do.		IP
33.36 .....	.....do.		IP
33.38 .....	.....do.		IP
33.40	Mobile	12, 14.	
35.02 .....	.....do.	11, 12, 13.	
35.04	Base or Mobile	10.	
35.06 .....	.....do.		
35.08 .....	.....do.		
35.10 .....	.....do.		
35.12 .....	.....do.		
35.14 .....	.....do.		
35.16 .....	.....do.		
35.18 .....	.....do.		
35.28 .....	.....do.		
35.32 .....	.....do.		
35.36 .....	.....do.		
35.40 .....	.....do.		
35.44 .....	.....do.		
35.48 .....	.....do.		
35.48 .....	.....do.		
35.52 .....	.....do.		
35.70 .....	.....do.		
35.72 .....	.....do.		
35.74 .....	.....do.		
35.76 .....	.....do.		
35.78 .....	.....do.		
35.80 .....	.....do.		
35.82 .....	.....do.		
35.84 .....	.....do.		
35.86 .....	.....do.		
35.88 .....	.....do.		
35.90 .....	.....do.		
35.92 .....	.....do.		
35.94 .....	.....do.		
35.96 .....	.....do.		
35.98 .....	.....do.		
36.25 .....	.....do.	15	IP
37.44 .....	.....do.		
37.46 .....	.....do.		IW
37.48 .....	.....do.		IW
37.50 .....	.....do.		IW
37.52 .....	.....do.		IW
37.54 .....	.....do.		IW
37.56 .....	.....do.		IW
37.58 .....	.....do.		IW
37.60	Base, mobile, or operational fixed.	16	IW
37.62	Base or mobile		IW
37.64 .....	.....do.		IW
37.66 .....	.....do.		IW
37.68 .....	.....do.		IW
37.70 .....	.....do.		IW
37.72 .....	.....do.		IW

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
37.74 .....	.....do.		IW
37.76 .....	.....do.		IW
37.78 .....	.....do.		IW
37.80 .....	.....do.		IW
37.82 .....	.....do.		IW
37.84	Base, mobile, or operational fixed.	16	IW
37.86	Base or mobile		IW
37.88 .....	.....do.		
41.71 .....	.....do.	15	IP
42.96 .....	.....do.		
42.98	Mobile	11, 12.	
43.00	Base or mobile		
43.02 .....	.....do.		
43.04 .....	.....do.	17.	
43.06 .....	.....do.		
43.08 .....	.....do.		
43.10 .....	.....do.		
43.12 .....	.....do.		
43.14 .....	.....do.		
43.16	Mobile.		
43.18	Base or mobile.		
43.28 .....	.....do.		
43.32 .....	.....do.		
43.36 .....	.....do.		
43.40 .....	.....do.		
43.44 .....	.....do.		
43.48 .....	.....do.		
43.52 .....	.....do.		
43.70 .....	.....do.		
43.72 .....	.....do.	18.	
43.74 .....	.....do.	18.	
43.76 .....	.....do.		
43.78 .....	.....do.		
43.80 .....	.....do.		
43.82 .....	.....do.	18.	
43.84 .....	.....do.	18.	
43.86 .....	.....do.	19.	
43.88 .....	.....do.	19.	
43.90 .....	.....do.	19.	
43.92 .....	.....do.	18, 19.	
43.94 .....	.....do.	19.	
43.96 .....	.....do.	18.	
43.98 .....	.....do.		
44.00 .....	.....do.		
44.02 .....	.....do.		
44.04 .....	.....do.		
44.06 .....	.....do.		
44.08 .....	.....do.		
44.10 .....	.....do.	20.	
44.12 .....	.....do.	18.	
44.14 .....	.....do.		
44.16 .....	.....do.	18.	
44.18 .....	.....do.	18.	
44.20 .....	.....do.	18, 21.	
44.22 .....	.....do.		
44.24 .....	.....do.		
44.26 .....	.....do.		
44.28 .....	.....do.		
44.30 .....	.....do.		
44.32 .....	.....do.	18.	
44.34 .....	.....do.		
44.36 .....	.....do.	18, 19.	
44.38 .....	.....do.	19.	
44.40 .....	.....do.	18, 19.	
44.42 .....	.....do.	19.	
44.44 .....	.....do.	19.	
44.46 .....	.....do.	18.	
44.48 .....	.....do.	18.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
44.50 .....	.....do.		
44.52 .....	.....do.		
44.54 .....	.....do.		
44.56 .....	.....do.		
44.58 .....	.....do.		
44.60 .....	.....do.		
47.44 .....	.....do.		
47.48 .....	.....do.		
47.52 .....	.....do.		
47.56 .....	.....do.		
47.60 .....	.....do.		
47.64 .....	.....do.		
47.68 .....	.....do.		
47.70 .....	.....do.		IW
47.72 .....	.....do.		IW
47.74 .....	.....do.		IW
47.76 .....	.....do.		IW
47.78 .....	.....do.		IW
47.80 .....	.....do.		IW
47.82 .....	.....do.		IW
47.84 .....	.....do.		IW
47.86 .....	.....do.		IW
47.88 .....	.....do.		IW
47.90 .....	.....do.		IW
47.92 .....	.....do.		IW
47.94 .....	.....do.		IW
47.96 .....	.....do.		IW
47.98 .....	.....do.		IW
48.00 .....	.....do.		IW
48.02 .....	.....do.		IW
48.04 .....	.....do.		IW
48.06 .....	.....do.		IW
48.08 .....	.....do.		IW
48.10 .....	.....do.		IW
48.12 .....	.....do.		IW
48.14 .....	.....do.		IW
48.16 .....	.....do.		IW
48.18 .....	.....do.		IW
48.20 .....	.....do.		IW
48.22 .....	.....do.		IW
48.24 .....	.....do.		IW
48.26 .....	.....do.		IW
48.28 .....	.....do.		IW
48.30 .....	.....do.		IW
48.32 .....	.....do.		IW
48.34 .....	.....do.		IW
48.36 .....	.....do.		IW
48.38 .....	.....do.		IW
48.40 .....	.....do.		IW
48.42 .....	.....do.		IW
48.44 .....	.....do.		IW
48.46 .....	.....do.		IW
48.48 .....	.....do.		IW
48.50 .....	.....do.		IW
48.52 .....	.....do.		IW
48.54 .....	.....do.		IW
48.56 .....	.....do.		
48.58 .....	.....do.		
48.60 .....	.....do.		
48.62 .....	.....do.		
48.64 .....	.....do.		
48.66 .....	.....do.		
48.68 .....	.....do.		
48.70 .....	.....do.		
48.72 .....	.....do.		
48.74 .....	.....do.		
48.76 .....	.....do.	18.	
48.78 .....	.....do.		
48.80 .....	.....do.		
48.82 .....	.....do.		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
48.84 .....	.....do.	18.	
48.86 .....	.....do.	18.	
48.88 .....	.....do.		
48.90 .....	.....do.		
48.92 .....	.....do.	18.	
48.94 .....	.....do.		
48.96 .....	.....do.		
48.98 .....	.....do.		
49.00 .....	.....do.		
49.02 .....	.....do.	18.	
49.04 .....	.....do.		
49.06 .....	.....do.		
49.08 .....	.....do.	18.	
49.10 .....	.....do.	18.	
49.12 .....	.....do.		
49.14 .....	.....do.		
49.16 .....	.....do.	18.	
49.18 .....	.....do.		
49.20 .....	.....do.	18.	
49.22 .....	.....do.		
49.24 .....	.....do.	18.	
49.26 .....	.....do.	18.	
49.28 .....	.....do.	18.	
49.30 .....	.....do.		
49.32 .....	.....do.		
49.34 .....	.....do.		
49.36 .....	.....do.	18.	
49.38 .....	.....do.		
49.40 .....	.....do.	18.	
49.42 .....	.....do.		
49.44 .....	.....do.		
49.46 .....	.....do.	18.	
49.48 .....	.....do.		
49.50 .....	.....do.	18.	
49.52 .....	.....do.		
49.54 .....	.....do.		
49.56 .....	.....do.		
49.58 .....	.....do.		
72 to 76	Operational fixed.	22.	
72.02	Mobile	23, 24.	
72.04 .....	.....do.	23, 24.	
72.06 .....	.....do.	23, 24.	
72.08 .....	.....do.	23, 24, 25.	
72.10 .....	.....do.	23, 24.	
72.12 .....	.....do.	23, 24.	
72.14 .....	.....do.	23, 24.	
72.16 .....	.....do.	23, 24, 25.	
72.18 .....	.....do.	23, 24.	
72.20 .....	.....do.	23, 24.	
72.22 .....	.....do.	23, 24.	
72.24 .....	.....do.	23, 24, 25.	
72.26 .....	.....do.	23, 24.	
72.28 .....	.....do.	23, 24.	
72.30 .....	.....do.	23, 24.	
72.32 .....	.....do.	23, 24, 25.	
72.34 .....	.....do.	23, 24.	
72.36 .....	.....do.	23, 24.	
72.38 .....	.....do.	23, 24.	
72.40 .....	.....do.	23, 24, 25.	
72.44 .....	.....do.	13, 24, 77.	
72.48 .....	.....do.	13, 24, 77.	
72.52 .....	.....do.	13, 24, 77.	
72.56 .....	.....do.	13, 24, 77.	
72.60do.	13, 24, 77.	
74.61do.	26, 77.	
74.63do.	26, 77.	
74.65do.	26, 77.	
74.67do.	26, 77.	
74.69do.	26, 77.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
74.71 .....	.....do	26, 77.	
74.73 .....	.....do	26, 77.	
74.75 .....	.....do	26, 77.	
74.77 .....	.....do	26, 77.	
74.79 .....	.....do	26, 77.	
75.21 .....	.....do	26, 77.	
75.23 .....	.....do	26, 77.	
75.25 .....	.....do	26, 77.	
75.27 .....	.....do	26, 77.	
75.29 .....	.....do	26, 77.	
75.31 .....	.....do	26, 77.	
75.33 .....	.....do	26, 77.	
75.35 .....	.....do	26, 77.	
75.37 .....	.....do	26, 77.	
75.39 .....	.....do	26, 77.	
75.44 .....	.....do	13, 24, 77.	
75.48 .....	.....do	13, 24, 77.	
75.52 .....	.....do	13, 24, 77.	
75.56 .....	.....do	13, 24, 77.	
75.60 .....	.....do	13, 24, 77.	
150 to 170	Base or mobile	27.	
150.815 .....	.....do		
150.830 .....	.....do	28, 29.	
150.845 .....	.....do		
150.8525 .....	.....do	30.	
150.860 .....	.....do		
150.8675 .....	.....do	30.	
150.875 .....	.....do		
150.8825 .....	.....do	30.	
150.890 .....	.....do		
150.8975 .....	.....do	30.	
150.905 .....	.....do		
150.920 .....	.....do	28, 29.	
150.935 .....	.....do		
150.9425 .....	.....do	30.	
150.950 .....	.....do		
150.9575 .....	.....do	30.	
150.965 .....	.....do		
150.9725 .....	.....do	30.	
150.980 .....	.....do	8	IP
150.9875 .....	.....do	8, 30	IP
150.995 .....	.....do	31.	
151.0025 .....	.....do	30, 31.	
151.010 .....	.....do	31.	
151.0175 .....	.....do	30, 31.	
151.025 .....	.....do	31.	
151.0325 .....	.....do	30, 31.	
151.040 .....	.....do	31.	
151.0475 .....	.....do	30, 31.	
151.055 .....	.....do	31.	
151.070	Base	28, 29, 31.	
151.085	Base or mobile	31.	
151.0925 .....	.....do	30, 31.	
151.100 .....	.....do	31.	
151.1075 .....	.....do	30, 31.	
151.115 .....	.....do	31.	
151.1225 .....	.....do	30, 31.	
151.130 .....	.....do	31.	
151.1375 .....	.....do	30, 31.	
151.145 .....	.....do	31.	
151.1525 .....	.....do	30, 31.	
151.160 .....	.....do	31.	
151.1675 .....	.....do	30, 31.	
151.175 .....	.....do	31.	
151.190	Base	28, 29, 31.	
151.205	Base or mobile	31.	
151.2125 .....	.....do	30, 31.	
151.220 .....	.....do	31.	
151.2275 .....	.....do	30, 31.	
151.235 .....	.....do	31.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
151.2425 .....	.....do	30, 31.	
151.250 .....	.....do	31.	
151.2575 .....	.....do	30, 31.	
151.265 .....	.....do	31.	
151.2725 .....	.....do	30, 31.	
151.280 .....	.....do	31.	
151.2875 .....	.....do	30, 31.	
151.295 .....	.....do	31.	
151.310	Base	28, 29, 31.	
151.325	Base or mobile	31.	
151.3325 .....	.....do	30, 31.	
151.340 .....	.....do	31.	
151.3475 .....	.....do	30, 31.	
151.355 .....	.....do	31.	
151.3625 .....	.....do	30, 31.	
151.370 .....	.....do	31.	
151.3775 .....	.....do	30, 31.	
151.385 .....	.....do	31.	
151.3925 .....	.....do	30, 31.	
151.400 .....	.....do	31.	
151.4075 .....	.....do	30, 31.	
151.415 .....	.....do	31.	
151.4225 .....	.....do	30, 31.	
151.430 .....	.....do	31.	
151.4375 .....	.....do	30, 31.	
151.445 .....	.....do	31.	
151.4525 .....	.....do	30, 31.	
151.460 .....	.....do	31.	
151.4675 .....	.....do	30, 31.	
151.475 .....	.....do	31.	
151.4825 .....	.....do	30, 31.	
151.490 .....	.....do	32.	
151.4975 .....	.....do	30, 32.	
151.505 .....	.....do	17.	
151.5125 .....	.....do	17, 30.	
151.520 .....	.....do		
151.5275 .....	.....do	30.	
151.535 .....	.....do		
151.5425 .....	.....do	30.	
151.550 .....	.....do		
151.5575 .....	.....do	30.	
151.565 .....	.....do		
151.5725 .....	.....do	30.	
151.580 .....	.....do		
151.5875 .....	.....do	30.	
151.595 .....	.....do		
151.6025 .....	.....do	30.	
151.625 .....	.....do	10.	
151.640 .....	.....do	10, 33.	
151.6475 .....	.....do	30.	
151.655 .....	.....do		
151.6625 .....	.....do	30.	
151.670 .....	.....do	30.	
151.6775 .....	.....do	30.	
151.685 .....	.....do		
151.700 .....	.....do	10, 30, 34.	
151.715 .....	.....do		
151.7225 .....	.....do	30.	
151.730 .....	.....do	30.	
151.7375 .....	.....do	30.	
151.745 .....	.....do		
151.760 .....	.....do	10, 30, 34.	
151.775 .....	.....do		
151.7825 .....	.....do	30.	
151.790 .....	.....do	30.	
151.7975 .....	.....do	30.	
151.805 .....	.....do		
151.820	Mobile	12, 14, 30, 35.	
151.835	Base or mobile.		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
151.8425 .....	.....do	30.	
151.850 .....	.....do	30.	
151.8575 .....	.....do	30.	
151.865 .....	.....do		
151.880	Mobile	12, 14, 30, 35.	
151.895	Base or mobile.		
151.9025 .....	.....do	30.	
151.910 .....	.....do	30.	
151.9175 .....	.....do	30.	
151.925 .....	.....do		
151.940	Mobile	12, 14, 30, 35.	
151.955	Base or Mobile.		
151.9625 .....	.....do	30.	
151.970 .....	.....do	30.	
151.9775 .....	.....do	30.	
151.985 .....	.....do		
152.2625 .....	.....do	33.	
152.270 .....	.....do	6.	
152.2775 .....	.....do	6, 30.	
152.285 .....	.....do	6.	
152.2925 .....	.....do	6, 30.	
152.300 .....	.....do	6.	
152.3075 .....	.....do	6, 30.	
152.315 .....	.....do	6.	
152.3225 .....	.....do	6, 30.	
152.330 .....	.....do	6.	
152.3375 .....	.....do	6, 30.	
152.345 .....	.....do	6.	
152.3525 .....	.....do	6, 30.	
152.360 .....	.....do	6.	
152.3675 .....	.....do	6, 30.	
152.375 .....	.....do	6.	
152.3825 .....	.....do	6, 30.	
152.390 .....	.....do	6.	
152.3975 .....	.....do	6, 30.	
152.405 .....	.....do	6.	
152.4125 .....	.....do	6, 30.	
152.420 .....	.....do	6.	
152.4275 .....	.....do	6, 30.	
152.435 .....	.....do	6.	
152.4425 .....	.....do	6, 30.	
152.450 .....	.....do	6.	
152.4575 .....	.....do	6, 30.	
152.465 .....	.....do	6.	
152.480 .....	.....do	29, 36, 37, 38.	
152.8625 .....	.....do	33.	
152.870 .....	.....do	6.	
152.8775 .....	.....do	30.	
152.885 .....	.....do		
152.8925 .....	.....do	30.	
152.900 .....	.....do		
152.9075 .....	.....do	30.	
152.915 .....	.....do		
152.9225 .....	.....do	30.	
152.930 .....	.....do		
152.9375 .....	.....do	30.	
152.945 .....	.....do		
152.9525 .....	.....do	30.	
152.960 .....	.....do		
152.9675 .....	.....do	30.	
152.975 .....	.....do		
152.9825 .....	.....do	30.	
152.990 .....	.....do		
152.9975 .....	.....do	30.	
153.005 .....	.....do		
153.0125 .....	.....do	30.	
153.020 .....	.....do		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
153.0275 .....	.....do	30.	
153.035 .....	.....do		
153.0425 .....	.....do	30.	
153.050 .....	.....do	4, 7.	
153.0575 .....	.....do	4, 7, 30.	
153.065 .....	.....do		
153.0725 .....	.....do	30.	
153.080 .....	.....do	4, 7.	
153.0875 .....	.....do	4, 7, 30.	
153.095 .....	.....do		
153.1025 .....	.....do	30.	
153.110 .....	.....do	4, 7.	
153.1175 .....	.....do	4, 7, 30.	
153.125 .....	.....do		
153.1325 .....	.....do	30.	
153.140 .....	.....do	4, 7.	
153.1475 .....	.....do	4, 7, 30.	
153.155 .....	.....do		
153.1625 .....	.....do	30.	
153.170 .....	.....do	4, 7.	
153.1775 .....	.....do	4, 7, 30.	
153.185 .....	.....do		
153.1925 .....	.....do	30.	
153.200 .....	.....do	4, 7.	
153.2075 .....	.....do	4, 7, 30.	
153.215 .....	.....do		
153.2225 .....	.....do	30.	
153.230 .....	.....do	4, 7.	
153.2375 .....	.....do	4, 7, 30.	
153.245 .....	.....do		
153.2525 .....	.....do	30.	
153.260 .....	.....do	4, 7.	
153.2675 .....	.....do	4, 7, 30.	
153.275 .....	.....do		
153.2825 .....	.....do	30.	
153.290 .....	.....do	4, 7.	
153.2975 .....	.....do	4, 7, 30.	
153.305 .....	.....do		
153.3125 .....	.....do	30.	
153.320 .....	.....do	4, 7.	
153.3275 .....	.....do	4, 7, 30.	
153.335 .....	.....do		
153.3425 .....	.....do	30.	
153.350 .....	.....do	4, 7.	
153.3575 .....	.....do	4, 7, 30.	
153.365 .....	.....do		
153.3725 .....	.....do	30.	
153.380 .....	.....do		
153.3875 .....	.....do	30.	
153.395 .....	.....do		
153.4025 .....	.....do	30.	
153.410 .....	.....do		IW
153.4175 .....	.....do	30	IW
153.425 .....	.....do		
153.4325 .....	.....do	30.	
153.440 .....	.....do		
153.4475 .....	.....do	30.	
153.455 .....	.....do		
153.4625 .....	.....do	30.	
153.470 .....	.....do .....	.....	IW
153.4775 .....	.....do	30	IW
153.485 .....	.....do		
153.4925 .....	.....do	30.	
153.500 .....	.....do		
153.5075do	30.	
153.515do		
153.5225do	30.	
153.530do		IW
153.5375do	30	IW
153.545do		

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TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
153.5525do	30.	IW IW
153.560 .....	.....do.	
153.5675 .....	.....do	30.
153.575 .....	.....do.	
153.5825 .....	.....do	30.
153.590 .....	.....do	
153.5975 .....	.....do	30
153.605 .....	.....do.	
153.6125 .....	.....do	30.
153.620 .....	.....do.	
153.6275do	30.	IW IW
153.635 .....	.....do.	
153.6425 .....	.....do	30.
153.650 .....	.....do	
153.6575 .....	.....do	30
153.665 .....	.....do.	
153.6725 .....	.....do	30.
153.680 .....	.....do.	
153.6875 .....	.....do	30.
153.695 .....	.....do	
153.7025do	30	IW IW IW IW IW
153.710 .....	.....do	
153.7175 .....	.....do	30
153.725 .....	.....do	
153.7325 .....	.....do	30
154.45625	Fixed or mobile	39, 40, 41, 42.	
154.46375 .....	.....do	39, 40, 43.
154.47125 .....	.....do	39, 40, 41, 44.
154.47875 .....	.....do	39, 40, 41, 42.
154.4825	Base or mobile	30.	
154.490do.		IW IW
154.4975 .....	.....do	30.
154.505 .....	.....do	30.
154.515 .....	.....do.	
154.5275	Mobile	10, 30, 34.	
154.540 .....	.....Base or mobile.	
154.5475 .....	.....do	30.
154.555 .....	.....do	33.
154.570	Mobile	11, 12, 35, 45.	
154.585do	8, 46	IP
154.600 .....	.....do	11, 12, 45, 47.
154.610	Base or mobile	33.	
154.625 .....	.....do	36, 37, 48.
154.640	Base	30, 36, 37, 48.	
157.470	Base or mobile	12.	
157.4775 .....	.....do	12, 30.
157.485 .....	.....do	12.
157.4925 .....	.....do	12, 30.
157.500 .....	.....do	12.
157.5075do	12, 30.	IP IP
157.515 .....	.....do	12.
157.5225 .....	.....do	12, 30.
157.530	Mobile	6.	
157.5375 .....	.....do	6, 30.
157.545 .....	.....do	6.
157.5525 .....	.....do	6, 30.
157.560	Base or mobile	6.	
157.5675 .....	.....do	6, 30.
157.575	Mobile	6.	
157.5825do	6, 30.	
157.590 .....	.....do	6.
157.5975 .....	.....do	6, 30.
157.605 .....	.....do	6.

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
157.6125do	6, 30.	
157.620	Base or mobile	6.	
157.6275 .....	.....do	6, 30.
157.635	Mobile	6.	
157.6425 .....	.....do	6, 30.
157.650 .....	.....do	6.
157.6575 .....	.....do	6, 30.
157.665 .....	.....do	6.
157.6725 .....	.....do	6, 30.
157.680 .....	.....do	6.
157.6875do	6, 30.	IW IW IW
157.695 .....	.....do	6.
157.7025 .....	.....do	6, 30.
157.710 .....	.....do	6.
157.7175 .....	.....do	6, 30.
157.725	Base or mobile	6.	
157.740 .....	.....do	29, 36, 37, 38.
158.1225 .....	.....do	133
158.130 .....	.....do	
158.1375 .....	.....do	30
158.145do.		IW IW
158.1525 .....	.....do	30.
158.160 .....	.....do.	
158.1675 .....	.....do	30.
158.175 .....	.....do.	
158.1825 .....	.....do	30.
158.190 .....	.....do	
158.1975 .....	.....do	30
158.205 .....	.....do.	
158.2125do	30.	IW IW
158.220 .....	.....do.	
158.2275 .....	.....do	30.
158.235 .....	.....do.	
158.2425 .....	.....do	30.
158.250 .....	.....do	
158.2575 .....	.....do	30
158.265 .....	.....do.	
158.2725 .....	.....do	30.
158.280do.		
158.2875 .....	.....do	30.
158.295 .....	.....do.	
158.3025 .....	.....do	30.
158.310 .....	.....do	4, 7.
158.3175 .....	.....do	4, 7, 30.
158.325 .....	.....do.	
158.3325 .....	.....do	30.
158.340	Mobile.		
158.3475 .....	.....do	30.
158.355	Base or mobile.		IP
158.3625 .....	.....do	30.
158.370 .....	.....do	4, 7.
158.3775 .....	.....do	4, 7, 30.
158.385 .....	.....do.	
158.3925 .....	.....do	30.
158.400 .....	.....do	17.
158.4075 .....	.....do	17, 30.
158.415 .....	.....do.	
158.4225 .....	.....do	30.
158.430do	4, 7.	
158.4375 .....	.....do	4, 7, 30.
158.445	Mobile	8, 49	
158.460	Base or mobile	29, 36, 37, 38, 48.	
159.480 .....	.....do	8.
159.4875do	8, 30.	IP IP
159.495 .....	.....do.	
159.5025 .....	.....do	30.
159.510 .....	.....do.	
159.5175 .....	.....do	30.

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
159.525 .....	.....do.		
159.5325 .....	.....do	30.	
159.540 .....	.....do.		
159.5475 .....	.....do	30.	
159.555 .....	.....do.		
159.5625 .....	.....do	30.	
159.570 .....	.....do.		
159.5775 .....	.....do	30.	
159.585 .....	.....do.		
159.5925 .....	.....do	30.	
159.600 .....	.....do.		
159.6075 .....	.....do	30.	
159.615 .....	.....do.		
159.6225 .....	.....do	30.	
159.630 .....	.....do.		
159.6375 .....	.....do	30.	
159.645 .....	.....do.		
159.6525 .....	.....do	30.	
159.660 .....	.....do.		
159.6675 .....	.....do	30.	
159.675 .....	.....do.		
159.6825 .....	.....do	30.	
159.690 .....	.....do.		
159.6975 .....	.....do	30.	
159.705 .....	.....do.		
159.7125 .....	.....do	30.	
159.720 .....	.....do.		
159.7275 .....	.....do	30.	
159.735 .....	.....do.		
159.7425 .....	.....do	30.	
159.750 .....	.....do.		
159.7575 .....	.....do	30.	
159.765 .....	.....do.		
159.7725 .....	.....do	30.	
159.780 .....	.....do.		
159.7875 .....	.....do	30.	
159.795 .....	.....do.		
159.8025 .....	.....do	30.	
159.810 .....	.....do.		
159.8175 .....	.....do	30.	
159.825 .....	.....do.		
159.8325 .....	.....do	30.	
159.840 .....	.....do.		
159.8475 .....	.....do	30.	
159.855 .....	.....do.		
159.8625 .....	.....do	30.	
159.870 .....	.....do.		
159.8775 .....	.....do	30.	
159.885 .....	.....do.		
159.8925 .....	.....do	30.	
159.900 .....	.....do.		
159.9075 .....	.....do	30.	
159.915 .....	.....do.		
159.9225 .....	.....do	30.	
159.930 .....	.....do.		
159.9375 .....	.....do	30.	
159.945 .....	.....do.		
159.9525 .....	.....do	30.	
159.960 .....	.....do.		
159.9675 .....	.....do	30.	
159.975 .....	.....do.		
159.9825 .....	.....do	30.	
159.990 .....	.....do.		
159.9975 .....	.....do	30.	
160.005 .....	.....do.		
160.0125 .....	.....do	30.	
160.020 .....	.....do.		
160.0275 .....	.....do	30.	
160.035 .....	.....do.		
160.0425 .....	.....do	30.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
160.050 .....	.....do.		
160.0575 .....	.....do	30.	
160.065 .....	.....do.		
160.0725 .....	.....do	30.	
160.080 .....	.....do.		
160.0875 .....	.....do	30.	
160.095 .....	.....do.		
160.1025 .....	.....do	30.	
160.110 .....	.....do.		
160.1175 .....	.....do	30.	
160.125 .....	.....do.		
160.1325 .....	.....do	30.	
160.140 .....	.....do.		
160.1475 .....	.....do	30.	
160.155 .....	.....do.		
160.1625 .....	.....do	30.	
160.170 .....	.....do.		
160.1775 .....	.....do	30.	
160.185 .....	.....do.		
160.1925 .....	.....do	30.	
160.200 .....	.....do.		
160.2075 .....	.....do	30.	
160.215 .....	.....do	50	LR
160.2225 .....	.....do	30, 50	LR
160.230 .....	.....do	50	LR
160.2375 .....	.....do	30, 50	LR
160.245 .....	.....do	50	LR
160.2525 .....	.....do	30, 50	LR
160.260 .....	.....do	50	LR
160.2675 .....	.....do	30, 50	LR
160.275 .....	.....do	50	LR
160.2825 .....	.....do	30, 50	LR
160.290 .....	.....do	50	LR
160.2975 .....	.....do	30, 50	LR
160.305 .....	.....do	50	LR
160.3125 .....	.....do	30, 50	LR
160.320 .....	.....do	50	LR
160.3275 .....	.....do	30, 50	LR
160.335 .....	.....do	50	LR
160.3425 .....	.....do	30, 50	LR
160.350 .....	.....do	50	LR
160.3575 .....	.....do	30, 50	LR
160.365 .....	.....do	50	LR
160.3725 .....	.....do	30, 50	LR
160.380 .....	.....do	50	LR
160.3875 .....	.....do	30, 50	LR
160.395 .....	.....do	50	LR
160.4025 .....	.....do	30, 50	LR
160.410 .....	.....do	50, 52	LR
160.4175 .....	.....do	30, 50, 52	LR
160.425 .....	.....do	50, 52	LR
160.4325 .....	.....do	30, 50, 52	LR
160.440 .....	.....do	50, 52	LR
160.4475 .....	.....do	30, 50, 52	LR
160.455 .....	.....do	50, 52	LR
160.4625 .....	.....do	30, 50, 52	LR
160.470 .....	.....do	50, 52	LR
160.4775 .....	.....do	30, 50, 52	LR
160.485 .....	.....do	50, 52	LR
160.4925 .....	.....do	30, 50, 52	LR
160.500 .....	.....do	50, 52	LR
160.5075 .....	.....do	30, 50, 52	LR
160.515 .....	.....do	50, 52	LR
160.5225 .....	.....do	30, 50, 52	LR
160.530 .....	.....do	50, 52	LR
160.5375 .....	.....do	30, 50, 52	LR
160.545do	50, 52	LR
160.5525do	30, 50, 52	LR
160.560do	50, 52	LR
160.5675do	30, 50, 52	LR

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TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
160.575 .....	.....do	50, 52	LR
160.5825 .....	.....do	30, 50, 52	LR
160.590 .....	.....do	50, 52	LR
160.5975 .....	.....do	30, 50, 52	LR
160.605 .....	.....do	50, 52	LR
160.6125 .....	.....do	30, 50, 52	LR
160.620 .....	.....do	50	LR
160.6275 .....	.....do	30, 50	LR
160.635 .....	.....do	50	LR
160.6425 .....	.....do	30, 50	LR
160.650 .....	.....do	50	LR
160.6575 .....	.....do	30, 50	LR
160.665 .....	.....do	50	LR
160.6725 .....	.....do	30, 50	LR
160.680 .....	.....do	50	LR
160.6875 .....	.....do	30, 50	LR
160.695 .....	.....do	50	LR
160.7025 .....	.....do	30, 50	LR
160.710 .....	.....do	50	LR
160.7175 .....	.....do	30, 50	LR
160.725 .....	.....do	50	LR
160.7325 .....	.....do	30, 50	LR
160.740 .....	.....do	50	LR
160.7475 .....	.....do	30, 50	LR
160.755 .....	.....do	50	LR
160.7625 .....	.....do	30, 50	LR
160.770 .....	.....do	50	LR
160.7775 .....	.....do	30, 50	LR
160.785 .....	.....do	50	LR
160.7925 .....	.....do	30, 50	LR
160.800 .....	.....do	50	LR
160.8075 .....	.....do	30, 50	LR
160.815 .....	.....do	50	LR
160.8225 .....	.....do	30, 50	LR
160.830 .....	.....do	50	LR
160.8375 .....	.....do	30, 50	LR
160.845 .....	.....do	50	LR
160.8525 .....	.....do	30, 50	LR
160.860 .....	.....do	50, 51	LR
160.8675 .....	.....do	30, 50, 51	LR
160.875 .....	.....do	50, 51	LR
160.8825 .....	.....do	30, 50, 51	LR
160.890 .....	.....do	50, 51	LR
160.8975 .....	.....do	30, 50, 51	LR
160.905 .....	.....do	50, 51	LR
160.9125 .....	.....do	30, 50, 51	LR
160.920 .....	.....do	50, 51	LR
160.9275 .....	.....do	30, 50, 51	LR
160.935 .....	.....do	50, 51	LR
160.9425 .....	.....do	30, 50, 51	LR
160.950 .....	.....do	50, 51	LR
160.9575 .....	.....do	30, 50, 51	LR
160.965 .....	.....do	50, 51	LR
160.9725 .....	.....do	30, 50, 51	LR
160.980 .....	.....do	50, 51	LR
160.9875 .....	.....do	30, 50, 51	LR
160.995 .....	.....do	50, 51	LR
161.0025 .....	.....do	30, 50, 51	LR
161.010 .....	.....do	50, 51	LR
161.0175 .....	.....do	30, 50, 51	LR
161.025 .....	.....do	50, 51	LR
161.0325 .....	.....do	30, 50, 51	LR
161.040 .....	.....do	50, 51	LR
161.0475 .....	.....do	30, 50, 51	LR
161.055 .....	.....do	50, 51	LR
161.0625 .....	.....do	30, 50, 51	LR
161.070 .....	.....do	50, 51	LR
161.0775 .....	.....do	30, 50, 51	LR
161.085 .....	.....do	50, 51	LR
161.0925 .....	.....do	30, 50, 51	LR

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
161.100 .....	.....do	50, 51	LR
161.1075 .....	.....do	30, 50, 51	LR
161.115 .....	.....do	50, 51	LR
161.1225 .....	.....do	30, 50, 51	LR
161.130 .....	.....do	50, 51	LR
161.1375 .....	.....do	30, 50, 51	LR
161.145 .....	.....do	50, 51	LR
161.1525 .....	.....do	30, 50, 51	LR
161.160 .....	.....do	50, 51	LR
161.1675 .....	.....do	30, 50, 51	LR
161.175 .....	.....do	50, 51	LR
161.1825 .....	.....do	30, 50, 51	LR
161.190 .....	.....do	50, 51	LR
161.1975 .....	.....do	30, 50, 51	LR
161.205 .....	.....do	50, 51	LR
161.2125 .....	.....do	30, 50, 51	LR
161.220 .....	.....do	50, 51	LR
161.2275 .....	.....do	30, 50, 51	LR
161.235 .....	.....do	50, 51	LR
161.2425 .....	.....do	30, 50, 51	LR
161.250 .....	.....do	50, 51	LR
161.2575 .....	.....do	30, 50, 51	LR
161.265 .....	.....do	50, 51	LR
161.2725 .....	.....do	30, 50, 51	LR
161.280 .....	.....do	50, 51	LR
161.2875 .....	.....do	30, 50, 51	LR
161.295 .....	.....do	50, 51	LR
161.3025 .....	.....do	30, 50, 51	LR
161.310 .....	.....do	50, 51	LR
161.3175 .....	.....do	30, 50, 51	LR
161.325 .....	.....do	50, 51	LR
161.3325 .....	.....do	30, 50, 51	LR
161.340 .....	.....do	50, 51	LR
161.3475 .....	.....do	30, 50, 51	LR
161.355 .....	.....do	50, 51	LR
161.3625 .....	.....do	30, 50, 51	LR
161.370 .....	.....do	50, 51	LR
161.3775 .....	.....do	30, 50, 51	LR
161.385 .....	.....do	50, 52	LR
161.3925 .....	.....do	30, 50, 52	LR
161.400 .....	.....do	50, 52	LR
161.4075 .....	.....do	30, 50, 52	LR
161.415 .....	.....do	50, 52	LR
161.4225 .....	.....do	30, 50, 52	LR
161.430 .....	.....do	50, 52	LR
161.4375 .....	.....do	30, 50, 52	LR
161.445 .....	.....do	50, 52	LR
161.4525 .....	.....do	30, 50, 52	LR
161.460 .....	.....do	50, 52	LR
161.4675 .....	.....do	30, 50, 52	LR
161.475 .....	.....do	50, 52	LR
161.4825 .....	.....do	30, 50, 52	LR
161.490 .....	.....do	50, 52	LR
161.4975 .....	.....do	30, 50, 52	LR
161.505 .....	.....do	50, 52	LR
161.5125 .....	.....do	30, 50, 52	LR
161.520 .....	.....do	50, 52	LR
161.5275 .....	.....do	30, 50, 52	LR
161.535 .....	.....do	50, 52	LR
161.5425 .....	.....do	30, 50, 52	LR
161.550 .....	.....do	50, 52	LR
161.5575 .....	.....do	30, 50, 52	LR
161.565 .....	.....do	50, 52	LR
161.610 .....	.....do	78	LR
169 to 172	Mobile, operational fixed.	53.	
173.20375	Fixed or mobile	39, 40, 41, 44.	
173.210 .....	.....do	40, 41, 44, 54.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
173.225	Base or mobile.		
173.2375	Fixed or mobile	39, 40, 41, 42.	
173.250	Base or mobile		
173.2625	Fixed or mobile	39, 40, 41, 42.	
173.275	Base or mobile.		
173.2875	Fixed or mobile	39, 40, 41, 42.	
173.300	Base or mobile.		
173.3125	Fixed or mobile	39, 40, 41, 42.	
173.325	Base or mobile.		
173.3375	Fixed or mobile	39, 40, 41, 42.	
173.350	Base or mobile.		
173.3625	Fixed or mobile	39, 40, 41, 42.	
173.375	Base or mobile.		
173.390	Fixed or mobile	40, 41, 44, 54.	
173.39625 .....	.....do	39, 40, 41, 42.	
216 to 220	Base or mobile	55.	
220 to 222	Base and mobile.	56.	
406 to 413	Operational fixed.	53.	
450 to 470	Fixed, base, or mobile.	27, 57.	
451.01875	Base or mobile	133	IW
451.025 .....	.....do .....	.....	IW
451.03125 .....	.....do	33	IW
451.0375 .....	.....do	30	IW
451.04375 .....	.....do	33	IW
451.050 .....	.....do .....	.....	IW
451.05625 .....	.....do	33	IW
451.0625 .....	.....do	30	IW
451.06875 .....	.....do	33	IW
451.075 .....	.....do .....	.....	IW
451.08125 .....	.....do	33	IW
451.0875 .....	.....do	30	IW
451.09375 .....	.....do	33	IW
451.100 .....	.....do .....	.....	IW
451.10625 .....	.....do	33	IW
451.1125 .....	.....do	30	IW
451.11875 .....	.....do	33	IW
451.125 .....	.....do .....	.....	IW
451.13125 .....	.....do	33	IW
451.1375 .....	.....do	30	IW
451.14375 .....	.....do	33	IW
451.150 .....	.....do .....	.....	IW
451.15625 .....	.....do	33	IW
451.1625 .....	.....do	30	IW
451.16875 .....	.....do	33	IW
451.175 .....	.....do .....	.....
451.18125 .....	.....do	33.	
451.1875 .....	.....do	30.	
451.19375 .....	.....do	33.	
451.200 .....	.....do .....	.....	IW
451.20625 .....	.....do	33	IW
451.2125 .....	.....do	30	IW
451.21875 .....	.....do	33	IW
451.225 .....	.....do .....	.....
451.23125 .....	.....do	33.	
451.2375 .....	.....do	30.	
451.24375 .....	.....do	33.	
451.250 .....	.....do .....	.....	IW
451.25625 .....	.....do	33	IW
451.2625 .....	.....do	30	IW

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
451.26875 .....	.....do	33	IW
451.275 .....	.....do .....	.....
451.28125 .....	.....do	33.	
451.2875 .....	.....do	30.	
451.29375 .....	.....do	33.	
451.300 .....	.....do .....	.....
451.30625 .....	.....do	33.	
451.3125 .....	.....do	30.	
451.31875 .....	.....do	33.	
451.325 .....	.....do .....	.....
451.33125 .....	.....do	33.	
451.3375 .....	.....do	30.	
451.34375 .....	.....do	33.	
451.350 .....	.....do .....	.....
451.35625 .....	.....do	33.	
451.3625 .....	.....do	30.	
451.36875 .....	.....do	33.	
451.375 .....	.....do .....	.....
451.38125 .....	.....do	33.	
451.3875 .....	.....do	30.	
451.39375 .....	.....do	33.	
451.400 .....	.....do .....	.....
451.40625 .....	.....do	33.	
451.4125 .....	.....do	30.	
451.41875 .....	.....do	33.	
451.425 .....	.....do .....	.....
451.43125 .....	.....do	33.	
451.4375 .....	.....do	30.	
451.44375 .....	.....do	33.	
451.450 .....	.....do .....	.....
451.45625 .....	.....do	33.	
451.4625 .....	.....do	30.	
451.46875 .....	.....do	33.	
451.475 .....	.....do .....	.....
451.48125 .....	.....do	33.	
451.4875 .....	.....do	30.	
451.49375 .....	.....do	33.	
451.500 .....	.....do .....	.....
451.50625 .....	.....do	33.	
451.5125 .....	.....do	30.	
451.51875 .....	.....do	33.	
451.525 .....	.....do .....	.....
451.53125 .....	.....do	33.	
451.5375 .....	.....do	30.	
451.54375 .....	.....do	33.	
451.550 .....	.....do	4, 7.	
451.55625 .....	.....do	4, 7, 33.	
451.5625 .....	.....do	4, 7, 30.	
451.56875 .....	.....do	4, 7, 33.	
451.575 .....	.....do .....	.....
451.58125 .....	.....do	33.	
451.5875 .....	.....do	30.	
451.59375 .....	.....do	33.	
451.600 .....	.....do	4, 7.	
451.60625 .....	.....do	4, 7, 33.	
451.6125 .....	.....do	4, 7, 30.	
451.61875 .....	.....do	4, 7, 33.	
451.625 .....	.....do .....	.....
451.63125 .....	.....do	33.	
451.6375 .....	.....do	30.	
451.64375 .....	.....do	33.	
451.650 .....	.....do	4, 7.	
451.65625 .....	.....do	4, 7, 33.	
451.6625 .....	.....do	4, 7, 30.	
451.66875do	4, 7, 33.	
451.675do	
451.68125do	33.	
451.6875do	30.	
451.69375do	33.	
451.700do	4, 7.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
451.70625 .....	.....do	4, 7, 33.	
451.7125 .....	.....do	4, 7, 30.	
451.71875 .....	.....do	4, 7, 33.	
451.725 .....	.....do		
451.73125 .....	.....do	33.	
451.7375 .....	.....do	30.	
451.74375 .....	.....do	33.	
451.750 .....	.....do	4, 7.	
451.75625 .....	.....do	4, 7, 33.	
451.7625 .....	.....do	4, 7, 30.	
451.76875 .....	.....do	4, 7, 33.	
451.775 .....	.....do		
451.78125 .....	.....do	33.	
451.7875 .....	.....do	30.	
451.79375 .....	.....do	33.	
451.800	Base, mobile, or operational fixed.	17, 58.	
451.80625 .....	.....do	17, 33, 58.	
451.8125 .....	.....do	17, 30, 58.	
451.81875 .....	.....do	17, 33, 58.	
451.825	Base or mobile.		
451.83125 .....	.....do	33.	
451.8375 .....	.....do	30.	
451.84375 .....	.....do	33.	
451.850 .....	.....do		
451.85625 .....	.....do	33.	
451.8625 .....	.....do	30.	
451.86875 .....	.....do	33.	
451.875 .....	.....do		
451.88125 .....	.....do	33.	
451.8875 .....	.....do	30.	
451.89375 .....	.....do	33.	
451.900 .....	.....do		
451.90625 .....	.....do	33.	
451.9125 .....	.....do	30.	
451.91875 .....	.....do	33.	
451.925 .....	.....do		
451.93125 .....	.....do	33.	
451.9375 .....	.....do	30.	
451.94375 .....	.....do	33.	
451.950 .....	.....do		
451.95625 .....	.....do	33.	
451.9625 .....	.....do	30.	
451.96875 .....	.....do	33.	
451.975 .....	.....do		
451.98125 .....	.....do	33.	
451.9875 .....	.....do	30.	
451.99375 .....	.....do	33.	
452.000 .....	.....do		
452.00625 .....	.....do	33.	
452.0125 .....	.....do	30.	
452.01875 .....	.....do	33.	
452.025 .....	.....do		
452.03125 .....	.....do	33.	
452.0375 .....	.....do	30.	
452.04375 .....	.....do	33.	
452.050 .....	.....do		
452.05625 .....	.....do	33.	
452.0625 .....	.....do	30.	
452.06875 .....	.....do	33.	
452.075 .....	.....do		
452.08125 .....	.....do	33.	
452.0875 .....	.....do	30.	
452.09375 .....	.....do	33.	
452.100 .....	.....do		
452.10625 .....	.....do	33.	
452.1125 .....	.....do	30.	
452.11875 .....	.....do	33.	
452.125 .....	.....do		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
452.13125 .....	.....do	33.	
452.1375 .....	.....do	30.	
452.14375 .....	.....do	33.	
452.150 .....	.....do		
452.15625 .....	.....do	33.	
452.1625 .....	.....do	30.	
452.16875 .....	.....do	33.	
452.175 .....	.....do		
452.18125 .....	.....do	33.	
452.1875 .....	.....do	30.	
452.19375 .....	.....do	33.	
452.200 .....	.....do		
452.20625 .....	.....do	33.	
452.2125 .....	.....do	30.	
452.21875 .....	.....do	33.	
452.225 .....	.....do		
452.23125 .....	.....do	33.	
452.2375 .....	.....do	30.	
452.24375 .....	.....do	33.	
452.250 .....	.....do		
452.25625 .....	.....do	33.	
452.2625 .....	.....do	30.	
452.26875 .....	.....do	33.	
452.275 .....	.....do		
452.28125 .....	.....do	33.	
452.2875 .....	.....do	30.	
452.29375 .....	.....do	33.	
452.300 .....	.....do		
452.30625 .....	.....do	33.	
452.3125 .....	.....do	30.	
452.31875 .....	.....do	33.	
452.325 .....	.....do		
452.33125 .....	.....do	33.	
452.3375 .....	.....do	30.	
452.34375 .....	.....do	33.	
452.350 .....	.....do		
452.35625 .....	.....do	33.	
452.3625 .....	.....do	30.	
452.36875 .....	.....do	33.	
452.375 .....	.....do		
452.38125 .....	.....do	33.	
452.3875 .....	.....do	30.	
452.39375 .....	.....do	33.	
452.400 .....	.....do		
452.40625 .....	.....do	33.	
452.4125 .....	.....do	30.	
452.41875 .....	.....do	33.	
452.425 .....	.....do		
452.43125 .....	.....do	33.	
452.4375 .....	.....do	30.	
452.44375 .....	.....do	33.	
452.450 .....	.....do		
452.45625 .....	.....do	33.	
452.4625 .....	.....do	30.	
452.46875 .....	.....do	33.	
452.475 .....	.....do		
452.48125 .....	.....do	33.	
452.4875 .....	.....do	30.	
452.49375 .....	.....do	33.	
452.500 .....	.....do		
452.50625 .....	.....do	33.	
452.5125 .....	.....do	30.	
452.51875 .....	.....do	33.	
452.525 .....	.....do		
452.53125 .....	.....do	33.	
452.5375 .....	.....do	30.	
452.54375 .....	.....do	33.	
452.550 .....	.....do		
452.55625 .....	.....do	33.	
452.5625 .....	.....do	30.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
452.56875 .....	.....do	33.	
452.575 .....	.....do.		
452.58125 .....	.....do	33.	
452.5875 .....	.....do	30.	
452.59375 .....	.....do	33.	
452.600 .....	.....do.		
452.60625 .....	.....do	33.	
452.6125 .....	.....do	30.	
452.61875 .....	.....do	33.	
452.625 .....	.....do.		
452.63125 .....	.....do	33.	
452.6375 .....	.....do	30.	
452.64375 .....	.....do	33.	
452.650 .....	.....do.		
452.65625 .....	.....do	33.	
452.6625 .....	.....do	30.	
452.66875 .....	.....do	33.	
452.675 .....	.....do.		
452.68125 .....	.....do	33.	
452.6875 .....	.....do	30.	
452.69375 .....	.....do	33.	
452.700 .....	.....do.		
452.70625 .....	.....do	33.	
452.7125 .....	.....do	30.	
452.71875 .....	.....do	33.	
452.725 .....	.....do.		
452.73125 .....	.....do	33.	
452.7375 .....	.....do	30.	
452.74375 .....	.....do	33.	
452.750 .....	.....do.		
452.75625 .....	.....do	33.	
452.7625 .....	.....do	30.	
452.76875 .....	.....do	33.	
452.775 .....	.....do.		
452.78125 .....	.....do	33.	
452.7875 .....	.....do	30.	
452.79375 .....	.....do	33.	
452.800 .....	.....do.		
452.80625 .....	.....do	33.	
452.8125 .....	.....do	30.	
452.81875 .....	.....do	33.	
452.825 .....	.....do.		
452.83125 .....	.....do	33.	
452.8375 .....	.....do	30.	
452.84375 .....	.....do	33.	
452.850 .....	.....do.		
452.85625 .....	.....do	33.	
452.8625 .....	.....do	30.	
452.86875 .....	.....do	33.	
452.875 .....	.....do.		
452.88125 .....	.....do	33.	
452.8875 .....	.....do	30.	
452.89375 .....	.....do	33.	
452.900 .....	.....do		LR
452.90625 .....	.....do	33	LR
452.9125 .....	.....do	30	LR
452.91875 .....	.....do	33	LR
452.925 .....	.....do	59	LR
452.93125 .....	.....do	33, 59	LR
452.9375 .....	.....do	30, 59	LR
452.94375 .....	.....do	33, 59	LR
452.950 .....	.....do	59	LR
452.95625 .....	.....do	33, 59	LR
452.9625 .....	.....do	30, 59	LR
452.96875 .....	.....do	33, 59	LR
452.975 .....	.....do.		
452.98125 .....	.....do	33.	
452.9875 .....	.....do	30.	
452.99375 .....	.....do	33.	
453.000 .....	.....do.		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
453.00625 .....	.....do	33.	
453.0125 .....	.....do	30.	
453.01875 .....	.....do	33.	
454.000 .....	.....do	8	IP
456.01875 .....	.....do	33	IW
456.025	Mobile		IW
456.03125 .....	.....do	33	IW
456.0375 .....	.....do	30	IW
456.04375 .....	.....do	33	IW
456.050 .....	.....do		IW
456.05625 .....	.....do	33	IW
456.0625 .....	.....do	30	IW
456.06875 .....	.....do	33	IW
456.075 .....	.....do		IW
456.08125 .....	.....do	33	IW
456.0875 .....	.....do	30	IW
456.09375 .....	.....do	33	IW
456.100 .....	.....do		IW
456.10625 .....	.....do	33	IW
456.1125 .....	.....do	30	IW
456.11875 .....	.....do	33	IW
456.125 .....	.....do		IW
456.13125 .....	.....do	33	IW
456.1375 .....	.....do	30	IW
456.14375 .....	.....do	33	IW
456.150 .....	.....do		IW
456.15625 .....	.....do	33	IW
456.1625 .....	.....do	30	IW
456.16875 .....	.....do	33	IW
456.175 .....	.....do.		
456.18125 .....	.....do	33.	
456.1875 .....	.....do	30.	
456.19375 .....	.....do	33.	
456.200 .....	.....do		IW
456.20625 .....	.....do	33	IW
456.2125 .....	.....do	30	IW
456.21875 .....	.....do	33	IW
456.225 .....	.....do.		
456.23125 .....	.....do	33.	
456.2375 .....	.....do	30.	
456.24375 .....	.....do	33.	
456.250 .....	.....do		IW
456.25625 .....	.....do	33	IW
456.2625 .....	.....do	30	IW
456.26875 .....	.....do	33	IW
456.275 .....	.....do.		
456.28125 .....	.....do	33.	
456.2875 .....	.....do	30.	
456.29375 .....	.....do	33.	
456.300 .....	.....do.		
456.30625 .....	.....do	33.	
456.3125 .....	.....do	30.	
456.31875 .....	.....do	33.	
456.325 .....	.....do.		
456.33125 .....	.....do	33.	
456.3375 .....	.....do	30.	
456.34375 .....	.....do	33.	
456.350 .....	.....do.		
456.35625 .....	.....do	33.	
456.3625 .....	.....do	30.	
456.36875 .....	.....do	33.	
456.375 .....	.....do.		
456.38125 .....	.....do	33.	
456.3875 .....	.....do	30.	
456.39375do	33.	
456.400do.		
456.40625do	33.	
456.4125do	30.	
456.41875do	33.	
456.425do.		

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
456.43125 .....	.....do	33.	
456.4375 .....	.....do	30.	
456.44375 .....	.....do	33.	
456.450 .....	.....do		
456.45625 .....	.....do	33.	
456.4625 .....	.....do	30.	
456.46875 .....	.....do	33.	
456.475 .....	.....do		
456.48125 .....	.....do	33.	
456.4875 .....	.....do	30.	
456.49375 .....	.....do	33.	
456.500 .....	.....do		
456.50625 .....	.....do	33.	
456.5125 .....	.....do	30.	
456.51875 .....	.....do	33.	
456.525 .....	.....do		
456.53125 .....	.....do	33.	
456.5375 .....	.....do	30.	
456.54375 .....	.....do	33.	
456.550 .....	.....do		
456.55625 .....	.....do	33.	
456.5625 .....	.....do	30.	
456.56875 .....	.....do	33.	
456.575 .....	.....do		
456.58125 .....	.....do	33.	
456.5875 .....	.....do	30.	
456.59375 .....	.....do	33.	
456.600 .....	.....do		
456.60625 .....	.....do	33.	
456.6125 .....	.....do	30.	
456.61875 .....	.....do	33.	
456.625 .....	.....do		
456.63125 .....	.....do	33.	
456.6375 .....	.....do	30.	
456.64375 .....	.....do	33.	
456.650 .....	.....do		
456.65625 .....	.....do	33.	
456.6625 .....	.....do	30.	
456.66875 .....	.....do	33.	
456.675 .....	.....do		
456.68125 .....	.....do	33.	
456.6875 .....	.....do	30.	
456.69375 .....	.....do	33.	
456.700 .....	.....do		
456.70625 .....	.....do	33.	
456.7125 .....	.....do	30.	
456.71875 .....	.....do	33.	
456.725 .....	.....do		
456.73125 .....	.....do	33.	
456.7375 .....	.....do	30.	
456.74375 .....	.....do	33.	
456.750 .....	.....do		
456.75625 .....	.....do	33.	
456.7625 .....	.....do	30.	
456.76875 .....	.....do	33.	
456.775 .....	.....do		
456.78125 .....	.....do	33.	
456.7875 .....	.....do	30.	
456.79375 .....	.....do	33.	
456.800	Base, mobile, or operational fixed.	17, 58.	
456.80625 .....	.....do	17, 33, 58.	
456.8125 .....	.....do	17, 30, 58.	
456.81875 .....	.....do	17, 33, 58.	
456.825	Mobile.		
456.83125 .....	.....do	33.	
456.8375 .....	.....do	30.	
456.84375 .....	.....do	33.	
456.850 .....	.....do		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
456.85625 .....	.....do	33.	
456.8625 .....	.....do	30.	
456.86875 .....	.....do	33.	
456.875 .....	.....do		
456.88125 .....	.....do	33.	
456.8875 .....	.....do	30.	
456.89375 .....	.....do	33.	
456.900 .....	.....do		
456.90625 .....	.....do	33.	
456.9125 .....	.....do	30.	
456.91875 .....	.....do	33.	
456.925 .....	.....do		
456.93125 .....	.....do	33.	
456.9375 .....	.....do	30.	
456.94375 .....	.....do	33.	
456.950 .....	.....do		
456.95625 .....	.....do	33.	
456.9625 .....	.....do	30.	
456.96875 .....	.....do	33.	
456.975 .....	.....do		
456.98125 .....	.....do	33.	
456.9875 .....	.....do	30.	
456.99375 .....	.....do	33.	
457.000 .....	.....do		
457.00625 .....	.....do	33.	
457.0125 .....	.....do	30.	
457.01875 .....	.....do	33.	
457.025 .....	.....do		
457.03125 .....	.....do	33.	
457.0375 .....	.....do	30.	
457.04375 .....	.....do	33.	
457.050 .....	.....do		
457.05625 .....	.....do	33.	
457.0625 .....	.....do	30.	
457.06875 .....	.....do	33.	
457.075 .....	.....do		
457.08125 .....	.....do	33.	
457.0875 .....	.....do	30.	
457.09375 .....	.....do	33.	
457.100 .....	.....do		
457.10625 .....	.....do	33.	
457.1125 .....	.....do	30.	
457.11875 .....	.....do	33.	
457.125 .....	.....do		
457.13125 .....	.....do	33.	
457.1375 .....	.....do	30.	
457.14375 .....	.....do	33.	
457.150 .....	.....do		
457.15625 .....	.....do	33.	
457.1625 .....	.....do	30.	
457.16875 .....	.....do	33.	
457.175 .....	.....do		
457.18125 .....	.....do	33.	
457.1875 .....	.....do	30.	
457.19375 .....	.....do	33.	
457.200 .....	.....do		
457.20625 .....	.....do	33.	
457.2125 .....	.....do	30.	
457.21875 .....	.....do	33.	
457.225 .....	.....do		
457.23125 .....	.....do	33.	
457.2375 .....	.....do	30.	
457.24375 .....	.....do	33.	
457.250 .....	.....do		
457.25625 .....	.....do	33.	
457.2625 .....	.....do	30.	
457.26875 .....	.....do	33.	
457.275 .....	.....do		
457.28125 .....	.....do	33.	
457.2875 .....	.....do	30.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
457.29375 .....	.....do	33.	
457.300 .....	.....do.		
457.30625 .....	.....do	33.	
457.3125 .....	.....do	30.	
457.31875 .....	.....do	33.	
457.325 .....	.....do.		
457.33125 .....	.....do	33.	
457.3375 .....	.....do	30.	
457.34375 .....	.....do	33.	
457.350 .....	.....do.		
457.35625 .....	.....do	33.	
457.3625 .....	.....do	30.	
457.36875 .....	.....do	33.	
457.375 .....	.....do.		
457.38125 .....	.....do	33.	
457.3875 .....	.....do	30.	
457.39375 .....	.....do	33.	
457.400 .....	.....do.		
457.40625 .....	.....do	33.	
457.4125 .....	.....do	30.	
457.41875 .....	.....do	33.	
457.425 .....	.....do.		
457.43125 .....	.....do	33.	
457.4375 .....	.....do	30.	
457.44375 .....	.....do	33.	
457.450 .....	.....do.		
457.45625 .....	.....do	33.	
457.4625 .....	.....do	30.	
457.46875 .....	.....do	33.	
457.475 .....	.....do.		
457.48125 .....	.....do	33.	
457.4875 .....	.....do	30.	
457.49375 .....	.....do	33.	
457.500 .....	.....do.		
457.50625 .....	.....do	33.	
457.5125 .....	.....do	30.	
457.51875 .....	.....do	33.	
457.525 .....	.....do	11, 12, 47, 60.	
457.53125 .....	.....do	11, 12, 33, 47, 60.	
457.5375 .....	.....do	11, 12, 30, 47, 60.	
457.54375 .....	.....do	11, 12, 33, 47, 60.	
457.550 .....	.....do	11, 12, 47, 60.	
457.55625 .....	.....do	11, 12, 33, 47, 60.	
457.5625 .....	.....do	11, 12, 30, 47, 60.	
457.56875 .....	.....do	11, 12, 33, 47, 60.	
457.575 .....	.....do	11, 12, 47, 60.	
457.58125 .....	.....do	11, 12, 33, 47, 60.	
457.5875 .....	.....do	11, 12, 30, 47, 60.	
457.59375 .....	.....do	11, 12, 33, 47, 60.	
457.600 .....	.....do	11, 12, 47, 60.	
457.60625 .....	.....do	11, 12, 33, 47, 60.	
457.6125 .....	.....do	11, 12, 30, 47, 60.	
457.61875 .....	.....do	11, 12, 33, 47, 60.	
457.625 .....	.....do.		

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
457.63125 .....	.....do	33.	
457.6375 .....	.....do	30.	
457.64375 .....	.....do	33.	
457.650 .....	.....do.		
457.65625 .....	.....do	33.	
457.6625 .....	.....do	30.	
457.66875 .....	.....do	33.	
457.675 .....	.....do.		
457.68125 .....	.....do	33.	
457.6875 .....	.....do	30.	
457.69375 .....	.....do	33.	
457.700 .....	.....do.		
457.70625 .....	.....do	33.	
457.7125 .....	.....do	30.	
457.71875 .....	.....do	33.	
457.725 .....	.....do.		
457.73125 .....	.....do	33.	
457.7375 .....	.....do	30.	
457.74375 .....	.....do	33.	
457.750 .....	.....do.		
457.75625 .....	.....do	33.	
457.7625 .....	.....do	30.	
457.76875 .....	.....do	33.	
457.775 .....	.....do.		
457.78125 .....	.....do	33.	
457.7875 .....	.....do	30.	
457.79375 .....	.....do	33.	
457.800 .....	.....do.		
457.80625 .....	.....do	33.	
457.8125 .....	.....do	30.	
457.81875 .....	.....do	33.	
457.825 .....	.....do.		
457.83125 .....	.....do	33.	
457.8375 .....	.....do	30.	
457.84375 .....	.....do	33.	
457.850 .....	.....do.		
457.85625 .....	.....do	33.	
457.8625 .....	.....do	30.	
457.86875 .....	.....do	33.	
457.875 .....	.....do.		
457.88125 .....	.....do	33.	
457.8875 .....	.....do	30.	
457.89375 .....	.....do	33.	
457.900 .....	.....do		LR
457.90625 .....	.....do	33	LR
457.9125 .....	.....do	30	LR
457.91875 .....	.....do	33	LR
457.925 .....	.....do	59	LR
457.93125 .....	.....do	33, 59	LR
457.9375 .....	.....do	30, 59	LR
457.94375 .....	.....do	33, 59	LR
457.950 .....	.....do	59	LR
457.95625 .....	.....do	33, 59	LR
457.9625 .....	.....do	30, 59	LR
457.96875 .....	.....do	33, 59	LR
457.975 .....	.....do.		
457.98125 .....	.....do	33.	
457.9875 .....	.....do	30.	
457.99375 .....	.....do	33.	
458.000 .....	.....do.		
458.00625 .....	.....do	33.	
458.0125 .....	.....do	30.	
458.01875 .....	.....do	33.	
459.000	Base or mobile	8	IP
460.650do	48, 61, 62.	
460.65625do	33, 48, 61, 62.	
460.6625do	30, 48, 61, 62, 69.	
460.66875do	33, 48, 61, 62.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
460.675 .....	.....do	48, 61, 62.	
460.68125 .....	.....do	33, 48, 61, 62.	
460.6875 .....	.....do	30, 48, 61, 62, 69.	
460.69375 .....	.....do	33, 48, 61, 62.	
460.700 .....	.....do	48, 61, 62.	
460.70625 .....	.....do	33, 48, 61, 62.	
460.7125 .....	.....do	30, 48, 61, 62, 69.	
460.71875 .....	.....do	33, 48, 61, 62.	
460.725 .....	.....do	48, 61, 62.	
460.73125 .....	.....do	33, 48, 61, 62.	
460.7375 .....	.....do	30, 48, 61, 62, 69.	
460.74375 .....	.....do	33, 48, 61, 62.	
460.750 .....	.....do	48, 61, 62.	
460.75625 .....	.....do	33, 48, 61, 62.	
460.7625 .....	.....do	30, 48, 61, 62, 69.	
460.76875 .....	.....do	33, 48, 61, 62.	
460.775 .....	.....do	48, 61, 62.	
460.78125 .....	.....do	33, 48, 61, 62.	
460.7875 .....	.....do	30, 48, 61, 62, 69.	
460.79375 .....	.....do	33, 48, 61, 62.	
460.800 .....	.....do	48, 61, 62.	
460.80625 .....	.....do	33, 48, 61, 62.	
460.8125 .....	.....do	30, 48, 61, 62, 69.	
460.81875 .....	.....do	33, 48, 61, 62.	
460.825 .....	.....do	48, 61, 62.	
460.83125 .....	.....do	33, 48, 61, 62.	
460.8375 .....	.....do	30, 48, 61, 62, 69.	
460.84375 .....	.....do	33, 48, 61, 62.	
460.850 .....	.....do	48, 61, 62.	
460.85625 .....	.....do	33, 48, 61, 62.	
460.8625 .....	.....do	30, 48, 61, 62, 69.	
460.86875 .....	.....do	33, 48, 61, 62.	
460.875 .....	.....do	48, 61, 62.	
460.88125 .....	.....do	33, 48, 61, 62.	
460.8875 .....	.....do	30, 48, 61, 62, 69.	
460.89375 .....	.....do	33, 48, 61, 62.	
460.900 .....	.....do	63, 64, 65.	
460.90625 .....	.....do	33, 63, 64, 65.	
460.9125 .....	.....do	30, 63, 64, 65.	
460.91875 .....	.....do	33, 63, 64, 65.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
460.925 .....	.....do	63, 64, 65.	
460.93125 .....	.....do	33, 63, 64, 65.	
460.9375 .....	.....do	30, 63, 64, 65.	
460.94375 .....	.....do	33, 63, 64, 65.	
460.950 .....	.....do	63, 64, 65.	
460.95625 .....	.....do	33, 63, 64, 65.	
460.9625 .....	.....do	30, 63, 64, 65.	
460.96875 .....	.....do	33, 63, 64, 65.	
460.975 .....	.....do	64, 65, 66.	
460.98125 .....	.....do	33, 64, 65, 66.	
460.9875 .....	.....do	30, 64, 65, 66.	
460.99375 .....	.....do	33, 64, 65, 66.	
461.000 .....	.....do	64, 65, 66.	
461.00625 .....	.....do	33, 64, 65, 66.	
461.0125 .....	.....do	30, 64, 65, 66.	
461.01875 .....	.....do	33, 64, 65, 66.	
461.025 .....	.....do	62.	
461.03125 .....	.....do	33, 62.	
461.0375 .....	.....do	30, 62.	
461.04375 .....	.....do	33, 62.	
461.050 .....	.....do	62.	
461.05625 .....	.....do	33, 62.	
461.0625 .....	.....do	30, 62.	
461.06875 .....	.....do	33, 62.	
461.075 .....	.....do	62.	
461.08125 .....	.....do	33, 62.	
461.0875 .....	.....do	30, 62.	
461.09375 .....	.....do	33, 62.	
461.100 .....	.....do	62.	
461.10625 .....	.....do	33, 62.	
461.1125 .....	.....do	30, 62.	
461.11875 .....	.....do	33, 62.	
461.125 .....	.....do	62.	
461.13125 .....	.....do	33, 62.	
461.1375 .....	.....do	30, 62.	
461.14375 .....	.....do	33, 62.	
461.150 .....	.....do	62.	
461.15625 .....	.....do	33, 62.	
461.1625 .....	.....do	30, 62.	
461.16875 .....	.....do	33, 62.	
461.175 .....	.....do	62.	
461.18125 .....	.....do	33, 62.	
461.1875 .....	.....do	30, 62.	
461.19375 .....	.....do	33, 62.	
461.200 .....	.....do	62.	
461.20625 .....	.....do	33, 62.	
461.2125 .....	.....do	30, 62.	
461.21875 .....	.....do	33, 62.	
461.225 .....	.....do	62.	
461.23125 .....	.....do	33, 62.	
461.2375 .....	.....do	30, 62.	
461.24375 .....	.....do	33, 62.	
461.250 .....	.....do	62.	
461.25625 .....	.....do	33, 62.	
461.2625 .....	.....do	30, 62.	
461.26875 .....	.....do	33, 62.	
461.275 .....	.....do	62.	
461.28125 .....	.....do	33, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
461.2875 .....	.....do	30, 62.	
461.29375 .....	.....do	33, 62.	
461.300 .....	.....do	62.	
461.30625 .....	.....do	33, 62.	
461.3125 .....	.....do	30, 62.	
461.31875 .....	.....do	33, 62.	
461.325 .....	.....do	62.	
461.33125 .....	.....do	33, 62.	
461.3375 .....	.....do	30, 62.	
461.34375 .....	.....do	33, 62.	
461.350 .....	.....do	62.	
461.35625 .....	.....do	33, 62.	
461.3625 .....	.....do	30, 62.	
461.36875 .....	.....do	33, 62.	
461.375 .....	.....do	62.	
461.38125 .....	.....do	33, 62.	
461.3875 .....	.....do	30, 62.	
461.39375 .....	.....do	33, 62.	
461.400 .....	.....do	62.	
461.40625 .....	.....do	33, 62.	
461.4125 .....	.....do	30, 62.	
461.41875 .....	.....do	33, 62.	
461.425 .....	.....do	62.	
461.43125 .....	.....do	33, 62.	
461.4375 .....	.....do	30, 62.	
461.44375 .....	.....do	33, 62.	
461.450 .....	.....do	62.	
461.45625 .....	.....do	33, 62.	
461.4625 .....	.....do	30, 62.	
461.46875 .....	.....do	33, 62.	
461.475 .....	.....do	62.	
461.48125 .....	.....do	33, 62.	
461.4875 .....	.....do	30, 62.	
461.49375 .....	.....do	33, 62.	
461.500 .....	.....do	62.	
461.50625 .....	.....do	33, 62.	
461.5125 .....	.....do	30, 62.	
461.51875 .....	.....do	33, 62.	
461.525 .....	.....do	62.	
461.53125 .....	.....do	33, 62.	
461.5375 .....	.....do	30, 62.	
461.54375 .....	.....do	33, 62.	
461.550 .....	.....do	62.	
461.55625 .....	.....do	33, 62.	
461.5625 .....	.....do	30, 62.	
461.56875 .....	.....do	33, 62.	
461.575 .....	.....do	62.	
461.58125 .....	.....do	33, 62.	
461.5875 .....	.....do	30, 62.	
461.59375 .....	.....do	33, 62.	
461.600 .....	.....do	62.	
461.60625 .....	.....do	33, 62.	
461.6125 .....	.....do	30, 62.	
461.61875 .....	.....do	33, 62.	
461.625 .....	.....do	62.	
461.63125 .....	.....do	33, 62.	
461.6375 .....	.....do	30, 62.	
461.64375 .....	.....do	33, 62.	
461.650 .....	.....do	62.	
461.65625 .....	.....do	33, 62.	
461.6625 .....	.....do	30, 62.	
461.66875 .....	.....do	33, 62.	
461.675 .....	.....do	62.	
461.68125 .....	.....do	33, 62.	
461.6875 .....	.....do	30, 62.	
461.69375 .....	.....do	33, 62.	
461.700 .....	.....do	62.	
461.70625 .....	.....do	33, 62.	
461.7125 .....	.....do	30, 62.	
461.71875 .....	.....do	33, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
461.725 .....	.....do	62.	
461.73125 .....	.....do	33, 62.	
461.7375 .....	.....do	30, 62.	
461.74375 .....	.....do	33, 62.	
461.750 .....	.....do	62.	
461.75625 .....	.....do	33, 62.	
461.7625 .....	.....do	30, 62.	
461.76875 .....	.....do	33, 62.	
461.775 .....	.....do	62.	
461.78125 .....	.....do	33, 62.	
461.7875 .....	.....do	30, 62.	
461.79375 .....	.....do	33, 62.	
461.800 .....	.....do	62.	
461.80625 .....	.....do	33, 62.	
461.8125 .....	.....do	30, 62.	
461.81875 .....	.....do	33, 62.	
461.825 .....	.....do	62.	
461.83125 .....	.....do	33, 62.	
461.8375 .....	.....do	30, 62.	
461.84375 .....	.....do	33, 62.	
461.850 .....	.....do	62.	
461.85625 .....	.....do	33, 62.	
461.8625 .....	.....do	30, 62.	
461.86875 .....	.....do	33, 62.	
461.875 .....	.....do	62.	
461.88125 .....	.....do	33, 62.	
461.8875 .....	.....do	30, 62.	
461.89375 .....	.....do	33, 62.	
461.900 .....	.....do	62.	
461.90625 .....	.....do	33, 62.	
461.9125 .....	.....do	30, 62.	
461.91875 .....	.....do	33, 62.	
461.925 .....	.....do	62.	
461.93125 .....	.....do	33, 62.	
461.9375 .....	.....do	30, 62.	
461.94375 .....	.....do	33, 62.	
461.950 .....	.....do	62.	
461.95625 .....	.....do	33, 62.	
461.9625 .....	.....do	30, 62.	
461.96875 .....	.....do	33, 62.	
461.975 .....	.....do	62.	
461.98125 .....	.....do	33, 62.	
461.9875 .....	.....do	30, 62.	
461.99375 .....	.....do	33, 62.	
462.000 .....	.....do	62.	
462.00625 .....	.....do	33, 62.	
462.0125 .....	.....do	30, 62.	
462.01875 .....	.....do	33, 62.	
462.025 .....	.....do	62.	
462.03125 .....	.....do	33, 62.	
462.0375 .....	.....do	30, 62.	
462.04375 .....	.....do	33, 62.	
462.050 .....	.....do	62.	
462.05625 .....	.....do	33, 62.	
462.0625 .....	.....do	30, 62.	
462.06875 .....	.....do	33, 62.	
462.075 .....	.....do	62.	
462.08125 .....	.....do	33, 62.	
462.0875 .....	.....do	30, 62.	
462.09375 .....	.....do	33, 62.	
462.100 .....	.....do	62.	
462.10625 .....	.....do	33, 62.	
462.1125 .....	.....do	30, 62.	
462.11875 .....	.....do	33, 62.	
462.125 .....	.....do	62.	
462.13125do	33, 62.	
462.1375do	30, 62.	
462.14375do	33, 62.	
462.150do	62.	
462.15625do	33, 62.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
462.1625 .....	.....do	30, 62.	
462.16875 .....	.....do	33, 62.	
462.175 .....	.....do	62.	
462.18125 .....	.....do	33, 62.	
462.1875 .....	.....do	30, 62.	
462.19375 .....	.....do	33, 62.	
462.200 .....	.....do		
462.20625 .....	.....do	33.	
462.2125 .....	.....do	30.	
462.21875 .....	.....do	33.	
462.225 .....	.....do		
462.23125 .....	.....do	33.	
462.2375 .....	.....do	30.	
462.24375 .....	.....do	33.	
462.250 .....	.....do		
462.25625 .....	.....do	33.	
462.2625 .....	.....do	30.	
462.26875 .....	.....do	33.	
462.275 .....	.....do		
462.28125 .....	.....do	33.	
462.2875 .....	.....do	30.	
462.29375 .....	.....do	33.	
462.300 .....	.....do		
462.30625 .....	.....do	33.	
462.3125 .....	.....do	30.	
462.31875 .....	.....do	33.	
462.325 .....	.....do		
462.33125 .....	.....do	33.	
462.3375 .....	.....do	30.	
462.34375 .....	.....do	33.	
462.350 .....	.....do		
462.35625 .....	.....do	33.	
462.3625 .....	.....do	30.	
462.36875 .....	.....do	33.	
462.375 .....	.....do		
462.38125 .....	.....do	33.	
462.3875 .....	.....do	30.	
462.39375 .....	.....do	33.	
462.400 .....	.....do		
462.40625 .....	.....do	33.	
462.4125 .....	.....do	30.	
462.41875 .....	.....do	33.	
462.425 .....	.....do		
462.43125 .....	.....do	33.	
462.4375 .....	.....do	30.	
462.44375 .....	.....do	33.	
462.450 .....	.....do		
462.45625 .....	.....do	33.	
462.4625 .....	.....do	30.	
462.46875 .....	.....do	33.	
462.475 .....	.....do		
462.48125 .....	.....do	33.	
462.4875 .....	.....do	30.	
462.49375 .....	.....do	33.	
462.500 .....	.....do		
462.50625 .....	.....do	33.	
462.5125 .....	.....do	30.	
462.51875 .....	.....do	33.	
462.525 .....	.....do		
462.53125 .....	.....do	33.	
462.750	Base	29, 36.	
462.7625	Mobile	67.	
462.775	Base	29, 36.	
462.7875	Mobile	67.	
462.800	Base	29, 36.	
462.8125	Mobile	67.	
462.825	Base	29, 36.	
462.8375	Mobile	67.	
462.850	Base	29, 36.	
462.8625	Mobile	67.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
462.875	Base	29, 36.	
462.8875	Mobile	67.	
462.900	Base	29, 36.	
462.9125	Mobile	67.	
462.925	Base	29, 36.	
462.9375	Mobile	67.	
462.94375	Base or mobile	33.	
463.200 .....	.....do	62.	
463.20625 .....	.....do	33, 62.	
463.2125 .....	.....do	30, 62.	
463.21875 .....	.....do	33, 62.	
463.225 .....	.....do	62.	
463.23125 .....	.....do	33, 62.	
463.2375 .....	.....do	30, 62.	
463.24375 .....	.....do	33, 62.	
463.250 .....	.....do	62.	
463.25625 .....	.....do	33, 62.	
463.2625 .....	.....do	30, 62.	
463.26875 .....	.....do	33, 62.	
463.275 .....	.....do	62.	
463.28125 .....	.....do	33, 62.	
463.2875 .....	.....do	30, 62.	
463.29375 .....	.....do	33, 62.	
463.300 .....	.....do	62.	
463.30625 .....	.....do	33, 62.	
463.3125 .....	.....do	30, 62.	
463.31875 .....	.....do	33, 62.	
463.325 .....	.....do	62.	
463.33125 .....	.....do	33, 62.	
463.3375 .....	.....do	30, 62.	
463.34375 .....	.....do	33, 62.	
463.350 .....	.....do	62.	
463.35625 .....	.....do	33, 62.	
463.3625 .....	.....do	30, 62.	
463.36875 .....	.....do	33, 62.	
463.375 .....	.....do	62.	
463.38125 .....	.....do	33, 62.	
463.3875 .....	.....do	30, 62.	
463.39375 .....	.....do	33, 62.	
463.400 .....	.....do	62.	
463.40625 .....	.....do	33, 62.	
463.4125 .....	.....do	30, 62.	
463.41875 .....	.....do	33, 62.	
463.425 .....	.....do	62.	
463.43125 .....	.....do	33, 62.	
463.4375 .....	.....do	30, 62.	
463.44375 .....	.....do	33, 62.	
463.450 .....	.....do	62.	
463.45625 .....	.....do	33, 62.	
463.4625 .....	.....do	30, 62.	
463.46875 .....	.....do	33, 62.	
463.475 .....	.....do	62.	
463.48125 .....	.....do	33, 62.	
463.4875 .....	.....do	30, 62.	
463.49375 .....	.....do	33, 62.	
463.500 .....	.....do	62.	
463.50625 .....	.....do	33, 62.	
463.5125 .....	.....do	30, 62.	
463.51875 .....	.....do	33, 62.	
463.525 .....	.....do	62.	
463.53125 .....	.....do	33, 62.	
463.5375 .....	.....do	30, 62.	
463.54375 .....	.....do	33, 62.	
463.550 .....	.....do	62.	
463.55625 .....	.....do	33, 62.	
463.5625 .....	.....do	30, 62.	
463.56875 .....	.....do	33, 62.	
463.575 .....	.....do	62.	
463.58125 .....	.....do	33, 62.	
463.5875 .....	.....do	30, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
463.59375 .....	.....do	33, 62.	
463.600 .....	.....do	62.	
463.60625 .....	.....do	33, 62.	
463.6125 .....	.....do	30, 62.	
463.61875 .....	.....do	33, 62.	
463.625 .....	.....do	62.	
463.63125 .....	.....do	33, 62.	
463.6375 .....	.....do	30, 62.	
463.64375 .....	.....do	33, 62.	
463.650 .....	.....do	62.	
463.65625 .....	.....do	33, 62.	
463.6625 .....	.....do	30, 62.	
463.66875 .....	.....do	33, 62.	
463.675 .....	.....do	62.	
463.68125 .....	.....do	33, 62.	
463.6875 .....	.....do	30, 62.	
463.69375 .....	.....do	33, 62.	
463.700 .....	.....do	62.	
463.70625 .....	.....do	33, 62.	
463.7125 .....	.....do	30, 62.	
463.71875 .....	.....do	33, 62.	
463.725 .....	.....do	62.	
463.73125 .....	.....do	33, 62.	
463.7375 .....	.....do	30, 62.	
463.74375 .....	.....do	33, 62.	
463.750 .....	.....do	62.	
463.75625 .....	.....do	33, 62.	
463.7625 .....	.....do	30, 62.	
463.76875 .....	.....do	33, 62.	
463.775 .....	.....do	62.	
463.78125 .....	.....do	33, 62.	
463.7875 .....	.....do	30, 62.	
463.79375 .....	.....do	33, 62.	
463.800 .....	.....do	62.	
463.80625 .....	.....do	33, 62.	
463.8125 .....	.....do	30, 62.	
463.81875 .....	.....do	33, 62.	
463.825 .....	.....do	62.	
463.83125 .....	.....do	33, 62.	
463.8375 .....	.....do	30, 62.	
463.84375 .....	.....do	33, 62.	
463.850 .....	.....do	62.	
463.85625 .....	.....do	33, 62.	
463.8625 .....	.....do	30, 62.	
463.86875 .....	.....do	33, 62.	
463.875 .....	.....do	62.	
463.88125 .....	.....do	33, 62.	
463.8875 .....	.....do	30, 62.	
463.89375 .....	.....do	33, 62.	
463.900 .....	.....do	62.	
463.90625 .....	.....do	33, 62.	
463.9125 .....	.....do	30, 62.	
463.91875 .....	.....do	33, 62.	
463.925 .....	.....do	62.	
463.93125 .....	.....do	33, 62.	
463.9375 .....	.....do	30, 62.	
463.94375 .....	.....do	33, 62.	
463.950 .....	.....do	62.	
463.95625 .....	.....do	33, 62.	
463.9625 .....	.....do	30, 62.	
463.96875 .....	.....do	33, 62.	
463.975 .....	.....do	62.	
463.98125 .....	.....do	33, 62.	
463.9875 .....	.....do	30, 62.	
463.99375 .....	.....do	33, 62.	
464.000 .....	.....do	62.	
464.00625 .....	.....do	33, 62.	
464.0125 .....	.....do	30, 62.	
464.01875 .....	.....do	33, 62.	
464.025 .....	.....do	62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
464.03125 .....	.....do	33, 62.	
464.0375 .....	.....do	30, 62.	
464.04375 .....	.....do	33, 62.	
464.050 .....	.....do	62.	
464.05625 .....	.....do	33, 62.	
464.0625 .....	.....do	30, 62.	
464.06875 .....	.....do	33, 62.	
464.075 .....	.....do	62.	
464.08125 .....	.....do	33, 62.	
464.0875 .....	.....do	30, 62.	
464.09375 .....	.....do	33, 62.	
464.100 .....	.....do	62.	
464.10625 .....	.....do	33, 62.	
464.1125 .....	.....do	30, 62.	
464.11875 .....	.....do	33, 62.	
464.125 .....	.....do	62.	
464.13125 .....	.....do	33, 62.	
464.1375 .....	.....do	30, 62.	
464.14375 .....	.....do	33, 62.	
464.150 .....	.....do	62.	
464.15625 .....	.....do	33, 62.	
464.1625 .....	.....do	30, 62.	
464.16875 .....	.....do	33, 62.	
464.175 .....	.....do	62.	
464.18125 .....	.....do	33, 62.	
464.1875 .....	.....do	30, 62.	
464.19375 .....	.....do	33, 62.	
464.200 .....	.....do	62.	
464.20625 .....	.....do	33, 62.	
464.2125 .....	.....do	30, 62.	
464.21875 .....	.....do	33, 62.	
464.225 .....	.....do	62.	
464.23125 .....	.....do	33, 62.	
464.2375 .....	.....do	30, 62.	
464.24375 .....	.....do	33, 62.	
464.250 .....	.....do	62.	
464.25625 .....	.....do	33, 62.	
464.2625 .....	.....do	30, 62.	
464.26875 .....	.....do	33, 62.	
464.275 .....	.....do	62.	
464.28125 .....	.....do	33, 62.	
464.2875 .....	.....do	30, 62.	
464.29375 .....	.....do	33, 62.	
464.300 .....	.....do	62.	
464.30625 .....	.....do	33, 62.	
464.3125 .....	.....do	30, 62.	
464.31875 .....	.....do	33, 62.	
464.325 .....	.....do	62.	
464.33125 .....	.....do	33, 62.	
464.3375 .....	.....do	30, 62.	
464.34375 .....	.....do	33, 62.	
464.350 .....	.....do	62.	
464.35625 .....	.....do	33, 62.	
464.3625 .....	.....do	30, 62.	
464.36875 .....	.....do	33, 62.	
464.375 .....	.....do	62.	
464.38125 .....	.....do	33, 62.	
464.3875 .....	.....do	30, 62.	
464.39375 .....	.....do	33, 62.	
464.400 .....	.....do	62.	
464.40625 .....	.....do	33, 62.	
464.4125 .....	.....do	30, 62.	
464.41875 .....	.....do	33, 62.	
464.425 .....	.....do	62.	
464.43125 .....	.....do	33, 62.	
464.4375do	30, 62.	
464.44375do	33, 62.	
464.450do	62.	
464.45625do	33, 62.	
464.4625do	30, 62.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
464.46875 .....	.....do	33, 62.	
464.475 .....	.....do	62.	
464.48125 .....	.....do	33, 62.	
464.4875 .....	.....do	30, 62.	
464.500 .....	.....do	10, 34.	
464.5125 .....	.....do	30, 62.	
464.51875 .....	.....do	33, 62.	
464.525 .....	.....do	62.	
464.53125 .....	.....do	33, 62.	
464.5375 .....	.....do	30, 62.	
464.550 .....	.....do	10, 34.	
464.5625 .....	.....do	30, 62.	
464.56875 .....	.....do	33, 62.	
464.575 .....	.....do	62.	
464.58125 .....	.....do	33, 62.	
464.5875 .....	.....do	30, 62.	
464.59375 .....	.....do	33, 62.	
464.600 .....	.....do	62.	
464.60625 .....	.....do	33, 62.	
464.6125 .....	.....do	30, 62.	
464.61875 .....	.....do	33, 62.	
464.625 .....	.....do	62.	
464.63125 .....	.....do	33, 62.	
464.6375 .....	.....do	30, 62.	
464.64375 .....	.....do	33, 62.	
464.650 .....	.....do	62.	
464.65625 .....	.....do	33, 62.	
464.6625 .....	.....do	30, 62.	
464.66875 .....	.....do	33, 62.	
464.675 .....	.....do	62.	
464.68125 .....	.....do	33, 62.	
464.6875 .....	.....do	30, 62.	
464.69375 .....	.....do	33, 62.	
464.700 .....	.....do	62.	
464.70625 .....	.....do	33, 62.	
464.7125 .....	.....do	30, 62.	
464.71875 .....	.....do	33, 62.	
464.725 .....	.....do	62.	
464.73125 .....	.....do	33, 62.	
464.7375 .....	.....do	30, 62.	
464.74375 .....	.....do	33, 62.	
464.750 .....	.....do	62.	
464.75625 .....	.....do	33, 62.	
464.7625 .....	.....do	30, 62.	
464.76875 .....	.....do	33, 62.	
464.775 .....	.....do	62.	
464.78125 .....	.....do	33, 62.	
464.7875 .....	.....do	30, 62.	
464.79375 .....	.....do	33, 62.	
464.800 .....	.....do	62.	
464.80625 .....	.....do	33, 62.	
464.8125 .....	.....do	30, 62.	
464.81875 .....	.....do	33, 62.	
464.825 .....	.....do	62.	
464.83125 .....	.....do	33, 62.	
464.8375 .....	.....do	30, 62.	
464.84375 .....	.....do	33, 62.	
464.850 .....	.....do	62.	
464.85625 .....	.....do	33, 62.	
464.8625 .....	.....do	30, 62.	
464.86875 .....	.....do	33, 62.	
464.875 .....	.....do	62.	
464.88125 .....	.....do	33, 62.	
464.8875 .....	.....do	30, 62.	
464.89375 .....	.....do	33, 62.	
464.900 .....	.....do	62.	
464.90625 .....	.....do	33, 62.	
464.9125 .....	.....do	30, 62.	
464.91875 .....	.....do	33, 62.	
464.925 .....	.....do	62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
464.93125 .....	.....do	33, 62.	
464.9375 .....	.....do	30, 62.	
464.94375 .....	.....do	33, 62.	
464.950 .....	.....do	62.	
464.95625 .....	.....do	33, 62.	
464.9625 .....	.....do	30, 62.	
464.96875 .....	.....do	33, 62.	
464.975 .....	.....do	62.	
464.98125 .....	.....do	33, 62.	
464.9875	Mobile	67.	
465.000	Base	29, 34, 36.	
465.0125	Mobile	67.	
465.01875 .....	.....do	33, 34.	
465.650 .....	.....do	11, 61, 62, 68.	
465.65625 .....	.....do	11, 33, 61, 62, 68.	
465.6625 .....	.....do	11, 30, 61, 62, 68, 69.	
465.66875 .....	.....do	11, 33, 61, 62, 68.	
465.675 .....	.....do	11, 61, 62, 68.	
465.68125 .....	.....do	11, 33, 61, 62, 68.	
465.6875 .....	.....do	11, 30, 61, 62, 68, 69.	
465.69375 .....	.....do	11, 33, 61, 62, 68.	
465.700 .....	.....do	11, 61, 62, 68.	
465.70625 .....	.....do	11, 33, 61, 62, 68.	
465.7125 .....	.....do	11, 30, 61, 62, 68, 69.	
465.71875 .....	.....do	11, 33, 61, 62, 68.	
465.725 .....	.....do	11, 61, 62, 68.	
465.73125 .....	.....do	11, 33, 61, 62, 68.	
465.7375 .....	.....do	11, 30, 61, 62, 68, 69.	
465.74375 .....	.....do	11, 33, 61, 62, 68.	
465.750 .....	.....do	11, 61, 62, 68.	
465.75625 .....	.....do	11, 33, 61, 62, 68.	
465.7625 .....	.....do	11, 30, 61, 62, 68, 69.	
465.76875 .....	.....do	11, 33, 61, 62, 68.	
465.775 .....	.....do	11, 61, 62, 68.	
465.78125 .....	.....do	11, 33, 61, 62, 68.	
465.7875 .....	.....do	11, 30, 61, 62, 68, 69.	
465.79375 .....	.....do	11, 33, 61, 62, 68.	
465.800 .....	.....do	11, 61, 62, 68.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
465.80625 .....	.....do	11, 33, 61, 62, 68.	
465.8125 .....	.....do	11, 30, 61, 62, 68, 69.	
465.81875 .....	.....do	11, 33, 61, 62, 68.	
465.825 .....	.....do	11, 61, 62, 68.	
465.83125 .....	.....do	11, 33, 61, 62, 68.	
465.8375 .....	.....do	11, 30, 61, 62, 68, 69.	
465.84375 .....	.....do	11, 33, 61, 62, 68.	
465.850 .....	.....do	11, 61, 62, 68.	
465.85625 .....	.....do	11, 33, 61, 62, 68.	
465.8625 .....	.....do	11, 30, 61, 62, 68, 69.	
465.86875 .....	.....do	11, 33, 61, 62, 68.	
465.875 .....	.....do	11, 61, 62, 68.	
465.88125 .....	.....do	11, 33, 61, 62, 68.	
465.8875 .....	.....do	11, 30, 61, 62, 68, 69.	
465.89375 .....	.....do	11, 33, 61, 62, 68.	
465.900 .....	.....do	63, 64.	
465.90625 .....	.....do	33, 63, 64.	
465.9125 .....	.....do	30, 63, 64.	
465.91875 .....	.....do	33, 63, 64.	
465.925 .....	.....do	63, 64.	
465.93125 .....	.....do	33, 63, 64.	
465.9375 .....	.....do	30, 63, 64.	
465.94375 .....	.....do	33, 63, 64.	
465.950 .....	.....do	63, 64.	
465.95625 .....	.....do	33, 63, 64.	
465.9625 .....	.....do	30, 63, 64.	
465.96875 .....	.....do	33, 63, 64.	
465.975 .....	.....do	64, 66.	
465.98125 .....	.....do	33, 64, 66.	
465.9875 .....	.....do	30, 64, 66.	
465.99375 .....	.....do	33, 64, 66.	
466.000 .....	.....do	64, 66.	
466.00625 .....	.....do	33, 64, 66.	
466.0125 .....	.....do	69.	
466.01875 .....	.....do	33, 64, 66.	
466.025 .....	.....do	62.	
466.03125 .....	.....do	33, 62.	
466.0375 .....	.....do	30, 62.	
466.04375 .....	.....do	33, 62.	
466.050 .....	.....do	62.	
466.05625 .....	.....do	33, 62.	
466.0625 .....	.....do	30, 62.	
466.06875 .....	.....do	33, 62.	
466.075 .....	.....do	62.	
466.08125 .....	.....do	33, 62.	
466.0875 .....	.....do	30, 62.	
466.09375 .....	.....do	33, 62.	
466.100 .....	.....do	62.	
466.10625 .....	.....do	33, 62.	
466.1125 .....	.....do	30, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
466.11875 .....	.....do	33, 62.	
466.125 .....	.....do	62.	
466.13125 .....	.....do	33, 62.	
466.1375 .....	.....do	30, 62.	
466.14375 .....	.....do	33, 62.	
466.150 .....	.....do	62.	
466.15625 .....	.....do	33, 62.	
466.1625 .....	.....do	30, 62.	
466.16875 .....	.....do	33, 62.	
466.175 .....	.....do	62.	
466.18125 .....	.....do	33, 62.	
466.1875 .....	.....do	30, 62.	
466.19375 .....	.....do	33, 62.	
466.200 .....	.....do	62.	
466.20625 .....	.....do	33, 62.	
466.2125 .....	.....do	30, 62.	
466.21875 .....	.....do	33, 62.	
466.225 .....	.....do	62.	
466.23125 .....	.....do	33, 62.	
466.2375 .....	.....do	30, 62.	
466.24375 .....	.....do	33, 62.	
466.250 .....	.....do	62.	
466.25625 .....	.....do	33, 62.	
466.2625 .....	.....do	30, 62.	
466.26875 .....	.....do	33, 62.	
466.275 .....	.....do	62.	
466.28125 .....	.....do	33, 62.	
466.2875 .....	.....do	30, 62.	
466.29375 .....	.....do	33, 62.	
466.300 .....	.....do	62.	
466.30625 .....	.....do	33, 62.	
466.3125 .....	.....do	30, 62.	
466.31875 .....	.....do	33, 62.	
466.325 .....	.....do	62.	
466.33125 .....	.....do	33, 62.	
466.3375 .....	.....do	30, 62.	
466.34375 .....	.....do	33, 62.	
466.350 .....	.....do	62.	
466.35625 .....	.....do	33, 62.	
466.3625 .....	.....do	30, 62.	
466.36875 .....	.....do	33, 62.	
466.375 .....	.....do	62.	
466.38125 .....	.....do	33, 62.	
466.3875 .....	.....do	30, 62.	
466.39375 .....	.....do	33, 62.	
466.400 .....	.....do	62.	
466.40625 .....	.....do	33, 62.	
466.4125 .....	.....do	30, 62.	
466.41875 .....	.....do	33, 62.	
466.425 .....	.....do	62.	
466.43125 .....	.....do	33, 62.	
466.4375 .....	.....do	30, 62.	
466.44375 .....	.....do	33, 62.	
466.450 .....	.....do	62.	
466.45625 .....	.....do	33, 62.	
466.4625 .....	.....do	30, 62.	
466.46875 .....	.....do	33, 62.	
466.475 .....	.....do	62.	
466.48125 .....	.....do	33, 62.	
466.4875 .....	.....do	30, 62.	
466.49375 .....	.....do	33, 62.	
466.500 .....	.....do	62.	
466.50625 .....	.....do	33, 62.	
466.5125 .....	.....do	30, 62.	
466.51875 .....	.....do	33, 62.	
466.525do	62.	
466.53125do	33, 62.	
466.5375do	30, 62.	
466.54375do	33, 62.	
466.550do	62.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
466.55625 .....	.....do	33, 62.	
466.5625 .....	.....do	30, 62.	
466.56875 .....	.....do	33, 62.	
466.575 .....	.....do	62.	
466.58125 .....	.....do	33, 62.	
466.5875 .....	.....do	30, 62.	
466.59375 .....	.....do	33, 62.	
466.600 .....	.....do	62.	
466.60625 .....	.....do	33, 62.	
466.6125 .....	.....do	30, 62.	
466.61875 .....	.....do	33, 62.	
466.625 .....	.....do	62.	
466.63125 .....	.....do	33, 62.	
466.6375 .....	.....do	30, 62.	
466.64375 .....	.....do	33, 62.	
466.650 .....	.....do	62.	
466.65625 .....	.....do	33, 62.	
466.6625 .....	.....do	30, 62.	
466.66875 .....	.....do	33, 62.	
466.675 .....	.....do	62.	
466.68125 .....	.....do	33, 62.	
466.6875 .....	.....do	30, 62.	
466.69375 .....	.....do	33, 62.	
466.700 .....	.....do	62.	
466.70625 .....	.....do	33, 62.	
466.7125 .....	.....do	30, 62.	
466.71875 .....	.....do	33, 62.	
466.725 .....	.....do	62.	
466.73125 .....	.....do	33, 62.	
466.7375 .....	.....do	30, 62.	
466.74375 .....	.....do	33, 62.	
466.750 .....	.....do	62.	
466.75625 .....	.....do	33, 62.	
466.7625 .....	.....do	30, 62.	
466.76875 .....	.....do	33, 62.	
466.775 .....	.....do	62.	
466.78125 .....	.....do	33, 62.	
466.7875 .....	.....do	30, 62.	
466.79375 .....	.....do	33, 62.	
466.800 .....	.....do	62.	
466.80625 .....	.....do	33, 62.	
466.8125 .....	.....do	30, 62.	
466.81875 .....	.....do	33, 62.	
466.825 .....	.....do	62.	
466.83125 .....	.....do	33, 62.	
466.8375 .....	.....do	30, 62.	
466.84375 .....	.....do	33, 62.	
466.850 .....	.....do	62.	
466.85625 .....	.....do	33, 62.	
466.8625 .....	.....do	30, 62.	
466.86875 .....	.....do	33, 62.	
466.875 .....	.....do	62.	
466.88125 .....	.....do	33, 62.	
466.8875 .....	.....do	30, 62.	
466.89375 .....	.....do	33, 62.	
466.900 .....	.....do	62.	
466.90625 .....	.....do	33, 62.	
466.9125 .....	.....do	30, 62.	
466.91875 .....	.....do	33, 62.	
466.925 .....	.....do	62.	
466.93125 .....	.....do	33, 62.	
466.9375 .....	.....do	30, 62.	
466.94375 .....	.....do	33, 62.	
466.950 .....	.....do	62.	
466.95625 .....	.....do	33, 62.	
466.9625 .....	.....do	30, 62.	
466.96875 .....	.....do	33, 62.	
466.975 .....	.....do	62.	
466.98125 .....	.....do	33, 62.	
466.9875 .....	.....do	30, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
466.99375 .....	.....do	33, 62.	
467.000 .....	.....do	62.	
467.00625 .....	.....do	33, 62.	
467.0125 .....	.....do	30, 62.	
467.01875 .....	.....do	33, 62.	
467.025 .....	.....do	62.	
467.03125 .....	.....do	33, 62.	
467.0375 .....	.....do	30, 62.	
467.04375 .....	.....do	33, 62.	
467.050 .....	.....do	62.	
467.05625 .....	.....do	33, 62.	
467.0625 .....	.....do	30, 62.	
467.06875 .....	.....do	33, 62.	
467.075 .....	.....do	62.	
467.08125 .....	.....do	33, 62.	
467.0875 .....	.....do	30, 62.	
467.09375 .....	.....do	33, 62.	
467.100 .....	.....do	62.	
467.10625 .....	.....do	33, 62.	
467.1125 .....	.....do	30, 62.	
467.11875 .....	.....do	33, 62.	
467.125 .....	.....do	62.	
467.13125 .....	.....do	33, 62.	
467.1375 .....	.....do	30, 62.	
467.14375 .....	.....do	33, 62.	
467.150 .....	.....do	62.	
467.15625 .....	.....do	33, 62.	
467.1625 .....	.....do	30, 62.	
467.16875 .....	.....do	33, 62.	
467.175 .....	.....do	62.	
467.18125 .....	.....do	33, 62.	
467.1875 .....	.....do	30, 62.	
467.19375 .....	.....do	33, 62.	
467.200 .....	.....do	62.	
467.20625 .....	.....do	33.	
467.2125 .....	.....do	30.	
467.21875 .....	.....do	33.	
467.225 .....	.....do	62.	
467.23125 .....	.....do	33.	
467.2375 .....	.....do	30.	
467.24375 .....	.....do	33.	
467.250 .....	.....do	62.	
467.25625 .....	.....do	33.	
467.2625 .....	.....do	30.	
467.26875 .....	.....do	33.	
467.275 .....	.....do	62.	
467.28125 .....	.....do	33.	
467.2875 .....	.....do	30.	
467.29375 .....	.....do	33.	
467.300 .....	.....do	62.	
467.30625 .....	.....do	33.	
467.3125 .....	.....do	30.	
467.31875 .....	.....do	33.	
467.325 .....	.....do	62.	
467.33125 .....	.....do	33.	
467.3375 .....	.....do	30.	
467.34375 .....	.....do	33.	
467.350 .....	.....do	62.	
467.35625 .....	.....do	33.	
467.3625 .....	.....do	30.	
467.36875 .....	.....do	33.	
467.375 .....	.....do	62.	
467.38125 .....	.....do	33.	
467.3875 .....	.....do	30.	
467.39375 .....	.....do	33.	
467.400 .....	.....do	62.	
467.40625 .....	.....do	33.	
467.4125 .....	.....do	30.	
467.41875 .....	.....do	33.	
467.425 .....	.....do	62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
467.43125 .....	.....do	33.	
467.4375 .....	.....do	30.	
467.44375 .....	.....do	33.	
467.450 .....	.....do		
467.45625 .....	.....do	33.	
467.4625 .....	.....do	30.	
467.46875 .....	.....do	33.	
467.475 .....	.....do		
467.48125 .....	.....do	33.	
467.4875 .....	.....do	30.	
467.49375 .....	.....do	33.	
467.500 .....	.....do		
467.50625 .....	.....do	33.	
467.5125 .....	.....do	30.	
467.51875 .....	.....do	33.	
467.525 .....	.....do		
467.53125 .....	.....do	33.	
467.74375 .....	.....do	33, 62.	
467.750 .....	.....do	11, 12, 35, 60.	
467.75625 .....	.....do	11, 12, 33, 35, 60.	
467.7625 .....	.....do	11, 12, 30, 35, 60.	
467.76875 .....	.....do	11, 12, 33, 35, 60.	
467.775 .....	.....do	11, 12, 35, 60.	
467.78125 .....	.....do	11, 12, 33, 35, 60.	
467.7875 .....	.....do	11, 12, 30, 35, 60.	
467.79375 .....	.....do	11, 12, 33, 35, 60.	
467.800 .....	.....do	11, 12, 35, 60.	
467.80625 .....	.....do	11, 12, 33, 35, 60.	
467.8125 .....	.....do	11, 12, 30, 35, 60.	
467.81875 .....	.....do	11, 12, 33, 35, 60.	
467.825 .....	.....do	11, 12, 35, 60.	
467.83125 .....	.....do	11, 12, 33, 35, 60.	
467.8375 .....	.....do	11, 12, 33, 35, 60.	
467.850 .....	.....do	11, 12, 35.	
467.8625 .....	.....do	67.	
467.875 .....	.....do	11, 12, 35.	
467.8875 .....	.....do	67.	
467.900 .....	.....do	11, 12, 35.	
467.9125 .....	.....do	67.	
467.925 .....	.....do	11, 12, 35.	
467.93125 .....	.....do	33.	
467.9375 .....	.....do	30, 67.	
467.94375 .....	.....do	33.	
468.200 .....	.....do	62.	
468.20625 .....	.....do	33, 62.	
468.2125 .....	.....do	30, 62.	
468.21875 .....	.....do	33, 62.	
468.225 .....	.....do	62.	
468.23125 .....	.....do	33, 62.	
468.2375 .....	.....do	30, 62.	
468.24375 .....	.....do	33, 62.	
468.250 .....	.....do	62.	
468.25625 .....	.....do	33, 62.	
468.2625 .....	.....do	30, 62.	
468.26875 .....	.....do	33, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
468.275 .....	.....do	62.	
468.28125 .....	.....do	33, 62.	
468.2875 .....	.....do	30, 62.	
468.29375 .....	.....do	33, 62.	
468.300 .....	.....do	62.	
468.30625 .....	.....do	33, 62.	
468.3125 .....	.....do	30, 62.	
468.31875 .....	.....do	33, 62.	
468.325 .....	.....do	62.	
468.33125 .....	.....do	33, 62.	
468.3375 .....	.....do	30, 62.	
468.34375 .....	.....do	33, 62.	
468.350 .....	.....do	62.	
468.35625 .....	.....do	33, 62.	
468.3625 .....	.....do	30, 62.	
468.36875 .....	.....do	33, 62.	
468.375 .....	.....do	62.	
468.38125 .....	.....do	33, 62.	
468.3875 .....	.....do	30, 62.	
468.39375 .....	.....do	33, 62.	
468.400 .....	.....do	62.	
468.40625 .....	.....do	33, 62.	
468.4125 .....	.....do	30, 62.	
468.41875 .....	.....do	33, 62.	
468.425 .....	.....do	62.	
468.43125 .....	.....do	33, 62.	
468.4375 .....	.....do	30, 62.	
468.44375 .....	.....do	33, 62.	
468.450 .....	.....do	62.	
468.45625 .....	.....do	33, 62.	
468.4625 .....	.....do	30, 62.	
468.46875 .....	.....do	33, 62.	
468.475 .....	.....do	62.	
468.48125 .....	.....do	33, 62.	
468.4875 .....	.....do	30, 62.	
468.49375 .....	.....do	33, 62.	
468.500 .....	.....do	62.	
468.50625 .....	.....do	33, 62.	
468.5125 .....	.....do	30, 62.	
468.51875 .....	.....do	33, 62.	
468.525 .....	.....do	62.	
468.53125 .....	.....do	33, 62.	
468.5375 .....	.....do	30, 62.	
468.54375 .....	.....do	33, 62.	
468.550 .....	.....do	62.	
468.55625 .....	.....do	33, 62.	
468.5625 .....	.....do	30, 62.	
468.56875 .....	.....do	33, 62.	
468.575 .....	.....do	62.	
468.58125 .....	.....do	33, 62.	
468.5875 .....	.....do	30, 62.	
468.59375 .....	.....do	33, 62.	
468.600 .....	.....do	62.	
468.60625 .....	.....do	33, 62.	
468.6125 .....	.....do	30, 62.	
468.61875 .....	.....do	33, 62.	
468.625 .....	.....do	62.	
468.63125 .....	.....do	33, 62.	
468.6375 .....	.....do	30, 62.	
468.64375 .....	.....do	33, 62.	
468.650 .....	.....do	62.	
468.65625 .....	.....do	33, 62.	
468.6625 .....	.....do	30, 62.	
468.66875 .....	.....do	33, 62.	
468.675 .....	.....do	62.	
468.68125do	33, 62.	
468.6875do	30, 62.	
468.69375do	33, 62.	
468.700do	62.	
468.70625do	33, 62.	

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INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
468.7125 .....	.....do	30, 62.	
468.71875 .....	.....do	33, 62.	
468.725 .....	.....do	62.	
468.73125 .....	.....do	33, 62.	
468.7375 .....	.....do	30, 62.	
468.74375 .....	.....do	33, 62.	
468.750 .....	.....do	62.	
468.75625 .....	.....do	33, 62.	
468.7625 .....	.....do	30, 62.	
468.76875 .....	.....do	33, 62.	
468.775 .....	.....do	62.	
468.78125 .....	.....do	33, 62.	
468.7875 .....	.....do	30, 62.	
468.79375 .....	.....do	33, 62.	
468.800 .....	.....do	62.	
468.80625 .....	.....do	33, 62.	
468.8125 .....	.....do	30, 62.	
468.81875 .....	.....do	33, 62.	
468.825 .....	.....do	62.	
468.83125 .....	.....do	33, 62.	
468.8375 .....	.....do	30, 62.	
468.84375 .....	.....do	33, 62.	
468.850 .....	.....do	62.	
468.85625 .....	.....do	33, 62.	
468.8625 .....	.....do	30, 62.	
468.86875 .....	.....do	33, 62.	
468.875 .....	.....do	62.	
468.88125 .....	.....do	33, 62.	
468.8875 .....	.....do	30, 62.	
468.89375 .....	.....do	33, 62.	
468.900 .....	.....do	62.	
468.90625 .....	.....do	33, 62.	
468.9125 .....	.....do	30, 62.	
468.91875 .....	.....do	33, 62.	
468.925 .....	.....do	62.	
468.93125 .....	.....do	33, 62.	
468.9375 .....	.....do	30, 62.	
468.94375 .....	.....do	33, 62.	
468.950 .....	.....do	62.	
468.95625 .....	.....do	33, 62.	
468.9625 .....	.....do	30, 62.	
468.96875 .....	.....do	33, 62.	
468.975 .....	.....do	62.	
468.98125 .....	.....do	33, 62.	
468.9875 .....	.....do	30, 62.	
468.99375 .....	.....do	33, 62.	
469.000 .....	.....do	62.	
469.00625 .....	.....do	33, 62.	
469.0125 .....	.....do	30, 62.	
469.01875 .....	.....do	33, 62.	
469.025 .....	.....do	62.	
469.03125 .....	.....do	33, 62.	
469.0375 .....	.....do	30, 62.	
469.04375 .....	.....do	33, 62.	
469.050 .....	.....do	62.	
469.05625 .....	.....do	33, 62.	
469.0625 .....	.....do	30, 62.	
469.06875 .....	.....do	33, 62.	
469.075 .....	.....do	62.	
469.08125 .....	.....do	33, 62.	
469.0875 .....	.....do	30, 62.	
469.09375 .....	.....do	33, 62.	
469.100 .....	.....do	62.	
469.10625 .....	.....do	33, 62.	
469.1125 .....	.....do	30, 62.	
469.11875 .....	.....do	33, 62.	
469.125 .....	.....do	62.	
469.13125 .....	.....do	33, 62.	
469.1375 .....	.....do	30, 62.	
469.14375 .....	.....do	33, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
469.150 .....	.....do	62.	
469.15625 .....	.....do	33, 62.	
469.1625 .....	.....do	30, 62.	
469.16875 .....	.....do	33, 62.	
469.175 .....	.....do	62.	
469.18125 .....	.....do	33, 62.	
469.1875 .....	.....do	30, 62.	
469.19375 .....	.....do	33, 62.	
469.200 .....	.....do	62.	
469.20625 .....	.....do	33, 62.	
469.2125 .....	.....do	30, 62.	
469.21875 .....	.....do	33, 62.	
469.225 .....	.....do	62.	
469.23125 .....	.....do	33, 62.	
469.2375 .....	.....do	30, 62.	
469.24375 .....	.....do	33, 62.	
469.250 .....	.....do	62.	
469.25625 .....	.....do	33, 62.	
469.2625 .....	.....do	30, 62.	
469.26875 .....	.....do	33, 62.	
469.275 .....	.....do	62.	
469.28125 .....	.....do	33, 62.	
469.2875 .....	.....do	30, 62.	
469.29375 .....	.....do	33, 62.	
469.300 .....	.....do	62.	
469.30625 .....	.....do	33, 62.	
469.3125 .....	.....do	30, 62.	
469.31875 .....	.....do	33, 62.	
469.325 .....	.....do	62.	
469.33125 .....	.....do	33, 62.	
469.3375 .....	.....do	30, 62.	
469.34375 .....	.....do	33, 62.	
469.350 .....	.....do	62.	
469.35625 .....	.....do	33, 62.	
469.3625 .....	.....do	30, 62.	
469.36875 .....	.....do	33, 62.	
469.375 .....	.....do	62.	
469.38125 .....	.....do	33, 62.	
469.3875 .....	.....do	30, 62.	
469.39375 .....	.....do	33, 62.	
469.400 .....	.....do	62.	
469.40625 .....	.....do	33, 62.	
469.4125 .....	.....do	30, 62.	
469.41875 .....	.....do	33, 62.	
469.425 .....	.....do	62.	
469.43125 .....	.....do	33, 62.	
469.4375 .....	.....do	30, 62.	
469.44375 .....	.....do	33, 62.	
469.450 .....	.....do	62.	
469.45625 .....	.....do	33, 62.	
469.4625 .....	.....do	30, 62.	
469.46875 .....	.....do	33, 62.	
469.475 .....	.....do	62.	
469.48125 .....	.....do	33, 62.	
469.4875 .....	.....do	30, 62.	
469.500 .....	.....do	10, 30, 34.	
469.5125 .....	.....do	30, 62.	
469.51875 .....	.....do	33, 62.	
469.525 .....	.....do	62.	
469.53125 .....	.....do	33, 62.	
469.5375 .....	.....do	30, 62.	
469.550 .....	.....do	10, 30, 34.	
469.5625 .....	.....do	30, 62.	
469.56875 .....	.....do	33, 62.	
469.575 .....	.....do	62.	
469.58125 .....	.....do	33, 62.	
469.5875 .....	.....do	30, 62.	
469.59375 .....	.....do	33, 62.	
469.600 .....	.....do	62.	
469.60625 .....	.....do	33, 62.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
469.6125 .....	.....do	30, 62.	
469.61875 .....	.....do	33, 62.	
469.625 .....	.....do	62.	
469.63125 .....	.....do	33, 62.	
469.6375 .....	.....do	30, 62.	
469.64375 .....	.....do	33, 62.	
469.650 .....	.....do	62.	
469.65625 .....	.....do	33, 62.	
469.6625 .....	.....do	30, 62.	
469.66875 .....	.....do	33, 62.	
469.675 .....	.....do	62.	
469.68125 .....	.....do	33, 62.	
469.6875 .....	.....do	30, 62.	
469.69375 .....	.....do	33, 62.	
469.700 .....	.....do	62.	
469.70625 .....	.....do	33, 62.	
469.7125 .....	.....do	30, 62.	
469.71875 .....	.....do	33, 62.	
469.725 .....	.....do	62.	
469.73125 .....	.....do	33, 62.	
469.7375 .....	.....do	30, 62.	
469.74375 .....	.....do	33, 62.	
469.750 .....	.....do	62.	
469.75625 .....	.....do	33, 62.	
469.7625 .....	.....do	30, 62.	
469.76875 .....	.....do	33, 62.	
469.775 .....	.....do	62.	
469.78125 .....	.....do	33, 62.	
469.7875 .....	.....do	30, 62.	
469.79375 .....	.....do	33, 62.	
469.800 .....	.....do	62.	
469.80625 .....	.....do	33, 62.	
469.8125 .....	.....do	30, 62.	
469.81875 .....	.....do	33, 62.	
469.825 .....	.....do	62.	
469.83125 .....	.....do	33, 62.	
469.8375 .....	.....do	30, 62.	
469.84375 .....	.....do	33, 62.	
469.850 .....	.....do	62.	
469.85625 .....	.....do	33, 62.	
469.8625 .....	.....do	30, 62.	
469.86875 .....	.....do	33, 62.	
469.875 .....	.....do	62.	
469.88125 .....	.....do	33, 62.	
469.8875 .....	.....do	30, 62.	
469.89375 .....	.....do	33, 62.	
469.900 .....	.....do	62.	
469.90625 .....	.....do	33, 62.	
469.9125 .....	.....do	30, 62.	
469.91875 .....	.....do	33, 62.	
469.925 .....	.....do	62.	
469.93125 .....	.....do	33, 62.	
469.9375 .....	.....do	30, 62.	
469.94375 .....	.....do	33, 62.	
469.950 .....	.....do	62.	
469.95625 .....	.....do	33, 62.	
469.9625 .....	.....do	30, 62.	
469.96875 .....	.....do	33, 62.	
469.975 .....	.....do	62.	
469.98125 .....	.....do	33, 62.	
470 to 512	Base or mobile	70.	
806 to 821	Mobile	71.	
851 to 866	Base or mobile	71.	
896 to 901	Mobile	71.	
928 and above	Operational fixed.	72.	
929 to 930	Base only	73.	
935 to 940	Base or mobile	71.	
1,427 to 1,435	Base, or mobile operational fixed.	55.	

INDUSTRIAL/BUSINESS POOL FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations	Coordinating
2,450 to 2,500	Base or mobile	74.	
8,400 to 8,500	.....do	75.	
10,550 to 10,680.	.....do	76.	

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b)(3) of this section:

(1) Use of this frequency is permitted as follows:

(i) Only entities engaged in the following activities are eligible to use this spectrum, and then only in accordance with § 90.266:

(A) Prospecting for petroleum, natural gas or petroleum products;

(B) Distribution of electric power or the distribution by pipeline of fuels or water;

(C) Exploration, its support services, and the repair of pipelines; or

(D) The repair of telecommunications circuits.

(ii) Except as provided in this part, licensees may not use these frequencies in the place of other operational circuits permitted by the Commission's rules. Circuits operating on these frequencies may be used only for the following purposes:

(A) Providing standby backup communications for circuits which have been disrupted and which directly affect the safety of life, property, or the national interest or are used for coordinating inter-utility, intra-utility, and power pool distribution of electric power;

(B) Providing operational circuits during exploration;

(C) Coordinating the repair of inter-utility, intra-utility, and power pool electric power distribution networks, or the repair of pipelines;

(D) Exploratory efforts in mining for solid fuels, minerals, and metals important to the national interest;

(E) Repair of pipelines used for the transmission of fuel or water;

(F) Services supporting the exploration for energy or mineral resources important to the national interest, without which such exploration cannot be conducted; or

(G) Coordinating the repair of wireline or point-to-point microwave circuits.

(2) Use of this frequency is limited to an amplitude modulation mode of operation.

(3) This frequency is available for assignment only to stations utilized for geophysical purposes.

(4) Geophysical operations may use tone or impulse signaling for purposes other than indicating failure of equipment or abnormal conditions on this frequency. All such tone or impulse signaling shall be on a secondary basis and subject to the following limitations:

(i) Maximum duration of a single non-voice transmission may not exceed 3 minutes;

(ii) The bandwidth utilized for secondary tone or impulse signaling shall not exceed that authorized to the licensee for voice emission on the frequency concerned;

(iii) Frequency loading resulting from the use of secondary tone or impulse signaling will not be considered in whole or in part, as a justification for authorizing additional frequencies in the licensee's mobile service system; and

(iv) The maximum transmitter output power for tone or impulse transmissions shall not exceed 50 watts.

(5) Frequencies below 25 MHz will be assigned to base or mobile stations only upon a satisfactory showing that, from a safety of life standpoint, frequencies above 25 MHz will not meet the operational requirements of the applicant.

(6) Frequencies may be assigned in pairs with the separation between base and mobile transmit frequencies being 5.26 MHz. A mobile station may be assigned the frequency which would normally be assigned to a base station for single-frequency operation. However, this single-frequency operation may be subject to interference that would not occur to a two-frequency system.

(7) This frequency is available for assignment to geophysical stations on a secondary basis to other licensees. Geophysical stations must cease operations on this frequency immediately upon receiving notice that interference

is being caused to mobile service stations.

(8) This frequency is primarily available for oil spill containment and cleanup operations and for training and drills essential in the preparations for the containment and cleanup of oil spills. It is secondarily available for general base-mobile operations on a noninterference basis. Secondary users of this frequency are required to forego its use should oil spill containment and cleanup activities be present in their area of operation or upon notice by the Commission or a primary user that harmful interference is being caused to oil spill containment or cleanup activities in other areas.

(9) Operation on this frequency is secondary to stations in the maritime mobile service operating in accordance with the International table of frequency allocations.

(10) This frequency will be assigned only to stations used in itinerant operations, except within 56 km (35 miles) of Detroit, Mich., where it may be assigned for either itinerant or permanent area operations (*i.e.*, general use).

(11) Operation on this frequency is limited to a maximum output power of 2 watts; and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may provide the operational functions of a base or fixed station on a secondary basis to mobile service operations, Provided, that the separation between the control point and the center of the radiating portion of the antenna of any units so used does not exceed 8 m (25 ft.).

(12) This frequency may not be used aboard aircraft in flight.

(13) This frequency is shared with the Public Safety Pool.

(14) Operation on this frequency is limited to a maximum output power of 1 watt and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may provide the operational functions of a base or fixed station on a secondary basis to mobile service operations, Provided, That the separation between the control point and the center of the radiating portion of the antenna of any units so used does not exceed 8 m (25 ft.).

(15) This Government frequency is available for shared Government/non-Government use by stations engaged in oil spill containment and cleanup operations and for training and drills essential in the preparation for containment and cleanup of oil spills. Such use will be confined to inland and coastal waterways.

(16) This frequency may be assigned only to stations operating in an interconnected or coordinated utility system in accordance with an operational communications plan which sets forth all points of communications. Authorizations at variance with an established operational communications plan will be made only on a secondary basis.

(17) This frequency will be assigned only to stations used in itinerant operations.

(18) This frequency is also used on a secondary basis for cordless telephones under part 15 of this chapter.

(19) In addition to single frequency operation, this frequency is available to base and mobile stations for the paired frequency mode of operation. For two frequency systems, the separation between base and mobile transmit frequencies is 500 kHz with the base stations transmitting on the higher of the two frequencies.

(20) In the State of Alaska only, the frequency 44.10 MHz is available for assignment on a primary basis to stations in the Common Carrier Rural Radio Service utilizing meteor burst communications. The frequency may be used by private radio stations for meteor burst communications on a secondary, non-interference basis. Usage shall be in accordance with part 22 of this chapter and this part 90. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(21) In the State of Alaska only, the frequency 44.20 MHz is available for assignment on a primary basis to private land mobile radio stations utilizing meteor burst communications. The frequency may be used by common carrier stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance

with part 22 of this chapter and this part 90. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(22) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257. Seismic telemetry transmitters type accepted with 1 watt or less power and a frequency tolerance not exceeding $\pm 0.005\%$ may be used as temporary operational fixed stations.

(23) This frequency is shared with fixed stations in other services and is subject to no protection from interference.

(24) All operations on this frequency are subject to the provisions of §90.257(b).

(25) This frequency is shared with the Radio Control (R/C) Service, of the part 95 Personal Radio Services, where it is used solely for the radio control of models.

(26) Pulsed modulations will not be authorized on this frequency.

(27) Assignment of frequencies in this band are subject to the provisions of §90.173. In the 150–170 MHz band, licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(28) In Puerto Rico and the Virgin Islands this frequency is subject to the following:

(i) This frequency is assigned only for one-way paging communications to mobile receivers. Only A1D, A2D, A3E, F1D, F2D, F3E, or G3E emissions may be authorized. Licensees may provide one-way paging communications on this frequency to individuals, persons eligible for licensing under subparts B or C of this part, to representatives of Federal Government agencies, and foreign governments and their representatives; and

(ii) This frequency will not be assigned to stations for use at temporary locations.

(29) This frequency will be authorized a channel bandwidth of 25 kHz. Except when limited elsewhere, one-way paging transmitters on this frequency may operate with an output power of 350 watts.

(30) This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(31) Use of this frequency is limited to stations located in Puerto Rico and the Virgin Islands.

(32) This frequency is not available to stations located in Puerto Rico and the Virgin Islands.

(33) This frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(34) Operation on this frequency is limited to a maximum output power of 35 watts.

(35) This frequency may be used for mobile operation for radio remote control and telemetering functions. A1D, A2D, F1D, or F2D emission may be authorized and mobile stations used to control remote objects or devices may be operated on the continuous carrier transmit mode.

(36) This frequency is assigned only for one-way paging communications to mobile receivers. Only A1D, A2D, A3E, F1D, F2D, F3E, or G3E emissions may be authorized. Licensees may provide one-way paging communications on this frequency to individuals, persons eligible for licensing under subparts B or C of this part, to representatives of Federal Government agencies, and foreign governments and their representatives.

(37) This frequency is available on a secondary basis to one-way paging communications.

(38) This frequency will not be assigned to stations for use at temporary locations.

(39) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 2.8 kHz and the maximum frequency deviation may not exceed 2.5 kHz. For AM transmitters the highest modulating frequency may not exceed 2.0 kHz. The carrier frequency must be maintained within 0.0005 percent, and

the authorized bandwidth may not exceed 6 kHz.

(40) This frequency is shared with the Public Safety Pool for remote control and telemetry operations.

(41) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 dB. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160 deg. of azimuth.

(42) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations. The height of the antenna system may not exceed 15.24 meters (50 ft.) above the ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(43) This frequency is available for the following:

(i) Assignment to multiple address fixed stations employing omnidirectional antennas used for power utility peak load shaving and shedding and to mobile stations used for the remote control of objects and devices. The maximum power that may be authorized to fixed stations is 300 watts output, and the maximum power that may be authorized for mobile stations is 1 watt output. This frequency may also be assigned to operational fixed stations employing directional antenna systems (front-to-back ratio of 20 dB) when such stations are located at least 120 km. (75 mi.) from the boundaries of any urbanized area of 200,000 or more population. (U.S. Census of Population, 1960). The maximum power output of the transmitter for such fixed stations may not exceed 50 watts. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized; or

(ii) On a secondary basis for remote control and telemetry operations, subject to paragraphs (c)(41), (42), (43), (46), and (47) of this section.

(44) The maximum output power of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobile stations. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized, and mobile stations used to control remote

objects and devices may be operated in the continuous transmit mode.

(45) Authorizations to operate on this frequency will be issued on a secondary basis for A2B, A2D, F2B or F2D emission for tone signaling or for a combination of such emission with A3E, F3E or G3E emission with a maximum bandwidth of 20 kHz. The output power shall not exceed 2 watts. The maximum distance between any transmitter and the center of the radiating portion of its antenna shall not exceed 8 m. (25 ft.).

(46) This frequency is limited to a maximum power of 20 watts.

(47) This frequency may be used for mobile operation for remote control and telemetering functions. A1D, A2D, F1D, or F2D emission may be authorized. The use of the continuous carrier transmit mode for these purposes is permitted only for stations authorized and continuously licensed since before May 21, 1971.

(48) Except as noted in paragraph (c)(61) of this section, operation on this frequency is limited to a maximum output power of 20 watts.

(49) Operation on this frequency is limited to a maximum output power of 75 watts.

(50) This frequency may also be used for the transmission of tone or voice communications, including such communications when prerecorded, for purposes of automatically indicating abnormal conditions of trackage and railroad rolling stock when in motion, on a secondary basis to other stations on this frequency. All such operations shall be subject to the following:

(i) The output power shall not exceed 30 watts;

(ii) The bandwidth used shall not exceed that authorized to the licensee for voice transmissions on the frequency concerned;

(iii) The station shall be so designed and installed that it can normally be activated only by its associated automatic control equipment and, in addition, it shall be equipped with a time delay or clock device which will deactivate the station within three (3) minutes following activation by the last car in the train; and

(iv) Stations authorized pursuant to the provisions of this paragraph are ex-

empt from the station identification requirements of § 90.425.

(51) In Puerto Rico and the Virgin Islands only, this frequency is available on a shared basis with remote pickup broadcast stations.

(52) In Puerto Rico and the Virgin Islands only, this frequency is available to all stations operating in the Industrial/Business Pool.

(53) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of § 90.265.

(54) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 1.7 kHz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1.2 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 3 kHz.

(55) This band is available to stations operating in this service subject to the provisions of § 90.259.

(56) Subpart T of this part contains rules for assignment of frequencies in the 220–222 MHz band.

(57) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(58) Operational fixed assignments on this frequency will only be made to an itinerant fixed control or relay station on a secondary basis to land-mobile stations in the Industrial/Business Pool, provided that the fixed relay or control station is to be associated with base and mobile facilities authorized to use other frequencies available for itinerant operation in the Industrial/Business Pool. All such use of these frequencies for fixed systems is limited to locations 161 or more km. (100 mi.) from the center of any urbanized area of 200,000 or more population, except that the distance may be 120 km. (75 mi.) if the output power does not exceed 20 watts. All such fixed systems are limited to a maximum of two frequencies and must employ directional antennas with a front-to-back ratio of at least 15 dB. The centers of urbanized areas of 200,000 or more population are

determined from the appendix, page 226, of the U.S. Commerce publication, "Air Line Distance Between Cities in the United States." Urbanized areas of 200,000 or more population are defined in the U.S. Census of Population, 1960, volume 1, table 23, page 1-50.

(59) This frequency may be assigned primarily for stations used for the purpose of controlling slave locomotives that are placed within a train to assist the lead locomotive by providing, among other functions, auxiliary starting, pulling, and braking actions. Additionally, on a secondary basis this frequency may be assigned for remote control of all types of locomotives and, within a railroad yard or terminal area, for remote control of cab indicator devices placed with a locomotive to give visual signals to the operator of the locomotive. (A1, A2, F1 or F2 emissions may be authorized.)

(60)(i) Frequencies subject to this assignment limitation are herein considered collectively for use for communications concerned with cargo handling from a dock, or a cargo handling facility, to a vessel alongside. Any number of the frequencies may be authorized to one licensee for the purpose. Mobile relay stations may be temporarily installed at or in the vicinity of a dock or cargo handling facility and used when a vessel is alongside the dock or cargo handling facility.

Mobile relay (MHz)	Mobile (MHz)
457.525	467.750
457.53125	467.75625
457.5375	467.7625
457.54375	467.76875
457.550	467.775
457.55625	467.78125
457.5625	467.7875
457.56875	467.79375
457.575	467.800
457.58125	467.80625
457.5875	467.8125
457.59375	467.81875
457.600	467.825
457.60625	467.83125
457.6125	
457.61875	

(ii) For single frequency simplex: Use mobile relay frequencies. The effective radiated power (ERP) on any frequency shall not exceed 2 watts. The center of the radiating system of the on-board repeater antenna shall be located no

more than 3 m (10 ft.) above the vessel's highest working deck.

(61) This frequency is available for assignment as follows:

(i) To persons furnishing commercial air transportation service or, pursuant to § 90.179, to an entity furnishing radio communications service to persons so engaged, for stations located on or near the airports listed in paragraph (c)(61)(iv) of this section. Stations will be authorized on a primary basis and may be used only in connection with the servicing and supplying of aircraft.

(ii) To stations in the Industrial/Business Pool for secondary use at locations 80 km (50 mi) or more from the coordinates of the listed airports at a maximum ERP of 300 watts.

(iii) To stations in the Industrial/Business Pool for secondary use at locations 16 km (10 mi) or more from the coordinates of the listed airports at a maximum transmitter output power of 2 watts. Use of the frequency is restricted to the confines of an industrial complex or manufacturing yard area. Stations licensed prior to April 17, 1986 may continue to operate with facilities authorized as of that date.

(iv) The airports and their respective reference coordinates are:

City and airport	Reference coordinate	
	Latitude	Longitude
Akron, OH: Akron-Canton Regional (CAK)	40°55'01" N	81°26'30" W
Albany-Troy-Schenectady, NY: Albany County (ALB)	42°44'53" N	73°48'12" W
Albuquerque, NM: Albuquerque International (ABQ)	35°02'30" N	106°36'23" W
Allentown-Bethlehem, PA: Allentown-Bethlehem-Easton (ABE)	40°39'11" N	75°26'25" W
Anchorage, AK: Anchorage International (ANC)	61°10'30" N	149°59'38" W
Atlanta, GA: Atlanta International (ATL)	33°38'25" N	84°25'37" W
Dekalb-Peachtree (PDK)	33°52'30" N	84°18'08" W
Fulton County (FTY)	33°46'45" N	84°31'17" W
Baltimore, MD: Baltimore-Washington Int'l (BWI)	39°10'30" N	76°40'10" W
Birmingham, AL: Birmingham Municipal (BHM) ..	33°33'50" N	86°45'16" W

City and airport	Reference coordinate		City and airport	Reference coordinate	
	Latitude	Longitude		Latitude	Longitude
Boston, MA: Logan International (BOS)	42°21'51" N	71°00'21" W	Denver-Jeffco (BJC)	39°54'28" N	105°26'53" W
Bridgeport, CT: Sikorsky Memorial (BDR)	41°09'49" N	73°07'35" W	Stapleton International (DEN) ..	39°46'22" N	104°52'38" W
Buffalo, NY: Greater Buffalo Int'l (BUF)	42°56'26" N	78°43'57" W	Des Moines, IA: Des Moines Municipal (DSM) ..	41°32'06" N	93°39'38" W
Canton, OH: Akron-Canton Regional (CAK)	40°55'01" N	81°26'30" W	Detroit, MI: Detroit City (DET)	42°24'33" N	83°00'36" W
Charlotte, NC: Charlotte-Douglas Int'l (CLT) ...	35°12'52" N	80°56'37" W	Detroit Metro-Wayne County (DTW)	42°12'55" N	83°20'55" W
Chattanooga, TN: Lovell (CHA)	35°02'07" N	85°12'15" W	Oakland-Pontiac (PTK)	42°39'54" N	83°25'05" W
Chicago, IL-Northwest, IN: Chicago-Wheeling-Palwaukee (PWK)	42°06'48" N	87°54'03" W	Willow Run (YIP)	42°14'16" N	83°31'50" W
Meigs (CGX)	41°51'32" N	87°36'28" W	El Paso, TX: El Paso International (ELP)	31°48'24" N	106°22'38" W
Michiana Regional (SBN)	41°42'18" N	86°18'59" W	Flint, MI: Bishop (FNT)	42°57'56" N	83°44'37" W
Midway (MDW)	41°47'10" N	87°45'08" W	Ft. Lauderdale-Hollywood, FL: Ft. Lauderdale Executive (FXE) ..	26°11'49" N	80°10'15" W
O'Harm International (ORD)	41°58'48" N	87°54'16" W	Ft. Lauderdale-Hollywd Int'l (FLL)	26°04'19" N	80°09'13" W
West Chicago-Dupage (DPE) ..	41°54'52" N	88°14'47" W	Ft. Worth, TX: Meacham (FTW)	32°49'09" N	97°21'41" W
Cincinnati, OH: Greater Cincinnati Int'l (CVG) ..	39°14'59" N	84°23'14" W	Fresno, CA: Chandler Downtown (FCH)	36°43'56" N	119°49'08" W
Lunken (LUK)	39°06'12" N	84°25'08" W	Fresno Air Terminal (FAT)	36°46'36" N	119°43'02" W
Cleveland, OH: Burke Lakefront (BKL)	41°31'03" N	81°41'01" W	Grand Rapids, MI: Kent County Int'l (GRR)	42°52'57" N	85°31'26" W
Cuyahoga County (CGF)	41°33'54" N	81°29'11" W	Hana, HI: Hana (HNN)	20°47'56" N	156°01'02" W
Hopkins International (CLE)	41°24'38" N	81°50'58" W	Harrisburg, PA: Capital City (CXY)	40°13'01" N	76°51'06" W
Columbus, OH: Port Columbus Int'l (CMH)	39°59'42" N	82°53'11" W	Harrisburg Int'l (MDT)	40°11'36" N	76°45'49" W
Dallas, TX: Addison (ADS)	32°58'06" N	96°50'10" W	Hartford, CT (Windsor Locks): Bradley Int'l (BDL)	41°56'20" N	72°41'01" W
Dallas-Ft. Worth Regional (DFW)	32°53'45" N	97°02'10" W	Hartford-Brainard (HFD)	41°44'10" N	72°39'02" W
Dallas-Love Field (DAL)	32°50'49" N	96°51'05" W	Hilo, HI: General Lyman Field (ITO)	19°43'24" N	155°03'05" W
Red Bird (RBD)	32°40'49" N	96°52'02" W	Honolulu, HI: Honolulu International (HNL) ...	21°19'20" N	157°55'27" W
Davenport, IA (Rock Island, Mo- line, IL): Davenport Municipal (DVN)	41°36'42" N	90°35'21" W	Houston, TX: W.P. Hobby (HOU)	29°38'43" N	95°16'43" W
Quad City (MLI)	41°26'56" N	90°30'35" W	D.W. Hooks Memorial (DWH) ..	30°03'50" N	95°33'11" W
Dayton, OH: Dayton International (DAY)	39°54'04" N	84°13'12" W	Houston Intercontinental (IAH) ..	29°58'55" N	95°20'45" W
Denver, CO: Centennial (APA)	39°34'19" N	104°50'54" W	Indianapolis, IN: Indianapolis Int'l (IND)	39°43'32" N	86°17'02" W
Colorado Springs Municipal (COS)	38°48'31" N	104°42'5" W	Jacksonville, FL: Craig Municipal (CRG)	30°20'10" N	81°30'53" W

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City and airport	Reference coordinate		City and airport	Reference coordinate	
	Latitude	Longitude		Latitude	Longitude
Jacksonville Int'l (JAX)	30°29'33" N	81°41'24" W	New Haven, CT: Tweed-New Haven Municipal (HVN)	41°15'50" N	72°53'15" W
Kahului, HI: Kahului (OGG)	20°54'07" N	156°25'59" W	New Orleans, LA: Lakefront (NEW)	30°02'33" N	90°01'41" W
Kailua-Kona, HI: Ke-Ahole (KOA)	19°44'08" N	156°25'06" W	New Orleans Int'l (MSY)	29°59'34" N	90°15'23" W
Kameula, HI: Waimea-Kohala (MUE)	20°00'16" N	155°40'15" W	Newport News-Hampton, VA: Patrick Henry Int'l (PHF)	37°07'54" N	76°29'36" W
Kansas City, MO-KS: Fairfax Municipal (KCK)	39°08'50" N	94°56'14" W	New York-Northeast, NJ: Farmingdale Republic (FRG) ...	40°43'43" N	73°24'50" W
Kansas City Int'l (MCI)	39°17'57" N	94°43'04" W	JFK International (JFK)	40°38'25" N	73°46'42" W
Kansas City Municipal Dntn (MKC)	39°07'24" N	94°35'33" W	LaGuardia (LGA)	40°46'38" N	73°52'27" W
Richard-Gebaur (GBW)	38°50'37" N	94°33'37" W	Long Island-McArthur (ISP)	40°47'44" N	73°06'00" W
Kauna Kakai, HI: Molokai (MKK)	21°09'22" N	157°55'07" W	Morristown Municipal (NJ) (MMU)	40°47'57" N	74°24'55" W
Las Vegas, NV: McCarran Int'l (LAS)	36°04'58" N	115°09'13" W	Newark Int'l (FWR)	40°41'35" N	74°10'07" W
Lihue, HI: Lihue (LIH)	21°58'42" N	159°20'40" W	Teterboro (NJ) (TEB)	40°51'00" N	74°03'41" W
Los Angeles, CA: Burbank-Glendale-Pasadena (BUR)	34°21'02" N	118°21'27" W	Norfolk-Portsmouth, VA: Norfolk Int'l (ORF)	36°53'40" N	76°12'06" W
Catalina (AVX)	33°24'20" N	118°24'50" W	Oklahoma City, OK: Wiley Post (DWA)	35°32'03" N	97°38'48" W
Long Beach-Daugherty Field (LGB)	33°49'03" N	118°09'03" W	Will Rogers World (OKC)	35°23'35" N	97°36'02" W
Los Angeles Int'l (LAX)	33°56'33" N	118°24'26" W	Omaha, NE: Eppley Airfield (OMA)	41°18'04" N	95°53'36" W
Ontario Int'l (ONT)	34°03'22" N	117°36'11" W	Orlando, FL: Orlando Executive (ORL)	28°32'43" N	81°19'59" W
Santa Ana-John Wayne-Or- ange City (SNA)	33°40'32" N	117°52'02" W	Orlando Int'l (MCO)	28°25'54" N	81°19'59" W
Louisville, KY: Standiford Field (SDF)	38°10'40" N	85°44'11" W	Philadelphia, PA-NJ: Northeast Philadelphia (PNE) ..	40°04'55" N	75°00'40" W
Memphis, TN: Memphis Int'l (MEM)	35°02'59" N	89°58'43" W	Philadelphia Int'l (PHC)	39°52'13" N	75°14'43" W
Miami, FLA: Miami Int'l (MIA)	25°47'34" N	80°17'26" W	Phoenix, AZ: Phoenix-Sky Habor Int'l (PHX)	33°26'10" N	112°00'32" W
Opa Locka (OPF)	25°54'25" N	80°16'50" W	Scottsdale Municipal (SDC)	33°37'22" N	111°54'35" W
Tamiami (TMB)	25°38'51" N	80°25'59" W	Pittsburgh, PA: Allegheny County (AGC)	40°21'16" N	79°55'49" W
Milwaukee, WI: General Mitchell (MKE)	42°56'49" N	87°53'49" W	Greater Pittsburgh Int'l (PIT) ...	40°29'30" N	80°13'55" W
Minneapolis-St. Paul, MN: Minneapolis-St. Paul (MSP)	44°53'03" N	93°12'54" W	Portland, OR: Portland-Hillsboro (HIO)	45°32'26" N	122°56'55" W
Mobile, AL: Bates Field (MOB)	30°41'23" N	88°14'31" W	Portland International (PDX) ...	45°35'20" N	122°35'47" W
Nashville, TN: Nashville Metropolitan (BNA) ...	36°07'37" N	86°40'53" W	Portland-Troutdale (TTD)	45°32'58" N	122°24'00" W
			Providence-Pawtucket, RI—MA: North Central State (SFZ)	41°55'15" N	71°29'30" W
			T.F. Green State (PVD)	41°43'31" N	71°25'41" W

City and airport	Reference coordinate	
	Latitude	Longitude
Reno, NV: Reno International (RNO)	39°29'52" N	119°46'04" W
Richmond, VA: Byrd International (RIC)	37°30'18" N	77°19'12" W
Rochester, NY: Rochester-Monroe County (ROC)	43°07'08" N	77°40'22" W
Sacramento, CA: Sacramento Executive (SAC) ..	38°30'45" N	121°29'33" W
Sacramento Metropolitan (SMF)	38°41'44" N	121°36'01" W
St. Louis, MO–IL: Spirit of St. Louis (SUS)	38°39'36" N	90°38'43" W
St. Louis-Lambert Int'l (STC) ...	38°44'51" N	90°21'39" W
St. Petersburg, FL: Albert Whitted Municipal (SPG)	27°45'53" N	82°37'39" W
Clearwater Int'l (PIE)	27°54'38" N	82°41'16" W
Salt Lake City, UT: Salt Lake City Int'l (SLC)	40°47'13" N	111°58'05" W
San Antonio, TX: San Antonio Int'l (SAT)	29°32'00" N	98°28'10" W
San Bernardino, CA: Ontario Int'l (ONT)	34°03'22" N	117°36'11" W
San Diego, CA: Lindbergh Int'l (SAN)	32°44'01" N	117°11'12" W
San Francisco-Oakland, CA: Metropolitan Oakland Int'l (OAK)	37°43'17" N	122°13'11" W
San Francisco Int'l (SFO)	37°37'08" N	122°22'26" W
San Jose, CA: San Jose Int'l (SJC)	37°21'41" N	121°55'38" W
Scranton, PA: Wilkes-Barre Scranton Int'l (AVP)	41°20'20" N	75°43'27" W
Seattle, WA: King County Int'l (BFI)	47°31'49" N	122°18'03" W
Seattle-Tacoma Int'l (SEA)	47°26'57" N	122°18'29" W
Shreveport, LA: Shreveport Downtown (DTN) ...	32°32'23" N	93°44'40" W
Shreveport Regional (SHV)	32°26'48" N	93°49'30" W
South Bend, IN: Michiana Regional (SBW)	41°42'18" N	86°18'59" W
Spokane, WA: Grant County (MWH)	47°12'28" N	119°19'08" W
Spokane Int'l (GEG)	47°37'12" N	117°31'58" W
Springfield, MA: Barnes Municipal (BAF)	42°09'28" N	72°42'58" W

City and airport	Reference coordinate	
	Latitude	Longitude
Westover Field (CEF)	42°11'52" N	72°31'50" W
Syracuse, NY: Syracuse-Hancock Int'l (SYR)	43°06'44" N	76°06'32" W
Tacoma, WA: Tacoma Narrows (TIW)	47°16'05" N	122°34'37" W
Tampa, FL: Tampa Int'l (TPA)	27°58'31" N	82°32'00" W
Toledo, OH: Toledo Express (TOL)	41°35'15" N	83°48'19" W
Trenton, NJ-PA: Mercer County (TTN)	40°16'38" N	74°48'50" W
Tucson, AZ: Tucson Int'l (TUS)	32°07'06" N	110°56'35" W
Tulsa, OK: R.L. Jones, Jr. (RVS)	36°02'18" N	95°59'05" W
Tulsa Int'l (TUL)	36°11'54" N	95°53'16" W
Washington, DC: Dulles International (IAD)	38°56'39" N	77°27'26" W
National (DCA)	38°51'07" N	77°02'17" W
Wichita, KS: Mid-Continent (ICT)	37°39'00" N	97°25'58" W
Wilkes-Barre, PA: Wilkes-Barre-Scranton (AVP) ..	41°20'20" N	75°43'27" W
Wilmington, DE: Gr. Wilm.-New Castle City (ILG)	39°40'42" N	75°36'25" W
Worcester, MA: Worcester Municipal (ORH)	42°16'02" N	71°52'34" W
Youngstown-Warren, OH-PA: Youngstown Municipal (YNG) ..	41°15'32" N	80°40'34" W

(62) This frequency may be assigned to fixed stations in the Industrial/Business Pool in accordance with the provisions of §90.261.

(63) Within the boundaries of urbanized areas of 200,000 or more population, defined in the United States Census of Population, 1960, vol. 1, table 23, page 1-50, this frequency may be used only by persons rendering a central station commercial protection service within the service area of the radio station utilizing the frequency and may be used only for communications pertaining to safety of life and property, and for maintenance or testing of the protection facilities. Central Station commercial protection service is defined as an electrical protection and supervisory service rendered to the

public from and by a central station accepted and certified by one or more of the recognized rating agencies, or the Underwriters Laboratories' (UL), or Factory Mutual System. Other stations in the Industrial/Business Pool may be licensed on this frequency only when all base, mobile relay and control stations are located at least 120 km (75 miles) from the city center or centers of the specified urbanized areas of 200,000 or more population. With respect to combination urbanized areas containing more than one city, 120 km (75 mile) separation shall be maintained from each city center which is included in the urbanized area. The locations of centers of cities are determined from appendix, page 226, of the U.S. Commerce publication "Air Line Distance Between Cities in the United States."

(64) Persons who render a central station commercial protection service are authorized to operate fixed stations on this frequency for the transmission of tone or impulse signals on a secondary, noninterference base-to-base/mobile operations subject to the following conditions and limitations:

(i) Secondary fixed operations may be used only for the following purposes:

(A) Indication of equipment malfunction;

(B) Actuation of a device to indicate the presence of an intruder, fire, or other hazardous condition on the property under the protection of the licensee;

(C) Indication of an abnormal condition in facilities under the protection of the licensee that, if not promptly reported, would result in danger to human life;

(D) Transmission, as may be necessary, to verify status of equipment; adjust operating conditions; or correct any abnormal condition; or

(E) Confirmation of status, or that an operation or correction has been accomplished.

(ii) The maximum duration of any one non-voice signal may not exceed 2 seconds and shall not be transmitted more than three times.

(iii) Systems employing automatic interrogation shall be limited to non-voice techniques and shall not be activated for this purpose more than 10

seconds out of any 60-second period. This 10-second frame includes both transmit and response times.

(iv) The bandwidth shall not exceed that authorized to the licensee for the primary operation on the frequency concerned.

(v) Frequency loading resulting from the use of secondary signaling will not be considered in whole or in part as a justification for authorizing additional frequencies in the licensee's mobile system.

(vi) A mobile service frequency may not be used exclusively for secondary signaling.

(vii) The output power shall not exceed 30 watts (at the remote site).

(viii) A1D, A2D, F1D, or F2D emission may be authorized.

(ix) The transmitter shall be designed to deactivate automatically after 3 minutes of continuous carrier radiation.

(x) Operational fixed stations authorized under this paragraph are exempt from the requirements of §§ 90.137(b), 90.429(d), 90.425 and 90.433.

(xi) On these frequencies, base, mobile relay or mobile stations may transmit secondary tone or impulse signals to receivers, as provided in this section.

(65) Licensees providing a central station commercial protection service may communicate with police or fire stations, or vehicles, on this frequency, and may install licensed transmitting units which operate on this frequency at police or fire stations, or in police or fire vehicles, if the frequency's primary use is in a base/mobile system for a central station commercial protection service.

(66) This frequency may be assigned only to persons rendering a central station commercial protection service, which is defined in paragraph (c)(63) of this section, within the service area of the radio station utilizing the frequency.

(67) Use of this frequency is on a secondary basis and subject to the provisions of § 90.267 (a)(3), (a)(4), (a)(5), and (a)(7).

(68) Maximum permissible power output for stations on airports is 3 watts. Each station authorized on this frequency will be classified and licensed

as a mobile station. Any units of such a station, however, may provide the functions of a base station on a secondary basis to mobile service operations provided that the vertical separation between the control point or ground level and the center of the radiating portion of the antenna of any units so used shall not exceed 8 m (25 ft.).

(69) This frequency may be used on a secondary, non-interference basis by a hospital or health care institution holding a license to operate a radio station under this part to operate a medical radio telemetry device with an output power not to exceed 20 milliwatts without specific authorization from the Commission.

(70) Subpart L of this part contains rules for assignment of frequencies in the 470–512 MHz band.

(71) Subpart S of this part contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(72) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 101 of this chapter.

(73) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(74) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(75) Use of frequencies in this band is limited to developmental operation and is subject to the provisions of subpart Q of this part.

(76) The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(77) All communications on this frequency must be conducted within the boundaries or confines of the licensee's business premises.

(78) Base and mobile stations authorized as of April 1, 1968, may continue to be authorized for such operation on a secondary basis to the Maritime Mobile Service. The licensees of such stations may renew, modify, reinstate, or assign their licenses in those cases where such assignment accompanies a change of ownership of the licensee's business to the assignee, and may expand existing systems when using that frequency; however, they will not be authorized to establish any new systems.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also § 90.253.)

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of § 90.263.

(2) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(3) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(4) The following frequencies are available only in Puerto Rico and the Virgin Islands. These “Base and Mobile” and “Mobile only” frequencies are available on a shared basis with the Public Safety Pool. These “Mobile only” frequencies may be assigned to a control station associated with a mobile relay system if it is also assigned to the associated mobile station.

Base and mobile	Mobile only
159.240	160.410
159.2475	160.4175
159.255	160.425
159.2625	160.4325
159.270	160.440
159.2775	160.4475
159.285	160.455
159.2925	160.4625
159.300	160.470
159.3075	160.4775
159.315	160.485

Base and mobile	Mobile only
159.3225	160.4925
159.330	160.500
159.3375	160.5075
159.345	160.515
159.3525	160.5225
159.360	160.530
159.3675	160.5375
159.375	160.545
159.3825	160.5525
159.390	160.560
159.3975	160.5675
159.405	160.575
159.4125	160.5825
159.420	160.590
159.4275	160.5975
159.435	160.605
159.4425	160.6125

(5) Low power mobile stations of 100 mw or less output power used for one-way, non-voice medical telemetry operations in hospitals or in medical convalescent centers are subject to the provisions of § 90.238.

(6) The frequency band 33.00–33.01 MHz may be used for developmental operations subject to the provisions of subpart Q of this part. Any type of emission other than pulsed emission may be used if the bandwidth occupied by the emission is contained within the assigned frequency band.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for developmental operation by applicants in this service subject to the provisions of subpart Q of this part, notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(4) Authorizations for multiple frequencies for geophysical operations will be granted on the frequencies governed by the limitations in paragraphs (c) (3) and (4) of this section notwithstanding this limitation. However, each geophysical exploration party may only use a maximum of four frequencies at any one time.

(5) Authorization for more than one mobile frequency in the band 72–76 MHz will be issued notwithstanding this limitation.

(6) This limitation shall not apply to paragraph (c)(1) of this section.

(7) Frequencies in the 457 and 467 MHz bands may be assigned collectively as provided by paragraph (c)(60) of this section notwithstanding this limitation.

(f) *Limitation on itinerant operation.* Base or mobile stations being utilized in itinerant operation will be authorized only on base or mobile frequencies designated for itinerant operation under paragraphs (c)(10) or (c)(17) of this section, or on other frequencies not designated for permanent use.

(g) The frequencies 10–490 kHz are used to operate electric utility Power Line Carrier (PLC) systems on power transmission lines for communications essential to the reliability and security of electric service to the public, in accordance with part 15 of this chapter. Any electric utility that generates, transmits, or distributes electrical energy for use by the general public or by the members of a cooperative organization may operate PLC systems and shall supply to a Federal Communications Commission/National Telecommunications and Information Administration recognized industry-operated entity, information on all existing, changes to existing, and proposed systems for inclusion in a data base. Such information shall include the frequency, power, location of transmitter(s), location of receivers and other technical and operational parameters, which would characterize the system's potential both to interfere with authorized radio users, and to receive harmful interference from these users. In an agreed upon format, the industry-operated entity shall inform the NTIA and the FCC of these system

characteristics prior to implementation of any proposed PLC system and shall provide monthly or periodic lists with supplements of PLC systems. The FCC and NTIA will supply appropriate application and licensing information to the notification activity regarding authorized radio stations operating in the band. PLC systems in this band operate on a noninterference basis to radio systems assigned frequencies by the NTIA or licensed by the FCC and are not protected from interference due to these radio operations.

EFFECTIVE DATE NOTE: At 62 FR 18874, Apr. 17, 1997, subpart C, formerly consisting of §§90.33–90.55, was revised, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

Subpart C—Special Emergency Radio Service

§90.33 Scope.

The Special Emergency Radio Service (SERS) covers the licensing of the radio communications of the following categories of activities: medical services, rescue organizations, veterinarians, handicapped persons, disaster relief organizations, school buses, beach patrols, establishments in isolated places, communications standby facilities, and emergency repair of public communications facilities. Entities not meeting these eligibility criteria may also be licensed in the SERS solely to provide service to SERS eligibles on one-way paging-only frequencies below 800 MHz, *i.e.*, those frequencies with the assignment limitations appearing at §90.53(b)(4) or (26). Private carrier systems licensed on other SERS channels prior to June 1, 1990, may continue to operate on those channels solely to provide radio communications service to SERS eligibles. Rules as to eligibility for licensing, permissible communications and classes and number of stations, and any special requirements as to each of these categories are set forth in the following sections. Frequencies available for these categories of services are shown in a separate frequency table.

[55 FR 24896, June 19, 1990]

§90.34 Public Safety National Plan.

The Commission has established a National Plan which specifies special policies and procedures governing the Public Safety Radio Services and the Special Emergency Radio Service. The National Plan is contained in the *Report and Order* in General Docket No. 87–112. The principal spectrum resource for the National Plan is the 821–824 MHz and the 866–869 MHz bands. The National plan establishes planning regions cov-

ering all parts of the United States, Puerto Rico, and the U.S. Virgin Islands. No assignments will be made in the 821–824 MHz and 866–869 MHz bands until a regional plan for the area has been accepted by the Commission.

[53 FR 1024, Jan. 15, 1988]

§90.35 Medical services.

(a) *Eligibility.* The following persons are eligible to hold authorization to operate radio stations for the delivery or rendition of medical services to the public and on a secondary basis, for transmission of messages related to the efficient administration of organizations and facilities engaged in medical services operations.

(1) Hospital establishments that offer services, facilities, and beds for use beyond 24 hours in rendering medical treatment.

(2) Institutions and organizations regularly engaged in providing medical services through clinics, public health facilities, and similar establishments.

(3) Ambulance companies regularly engaged in providing medical ambulance services.

(4) Rescue organizations for the limited purpose of participation in providing medical services.

(5) Associations comprised of two or more of the organizations eligible under paragraphs (a)(1), (2), (3), and (4) of this section, for the purpose of active participation in and direct operational control of the medical services communication activities of such organizations.

(6) Physicians, schools of medicine, oral surgeons, and associations of physicians or oral surgeons.

(7) Governmental entities and governmental agencies for their own medical activities.

(8) Governmental entities and governmental agencies for providing medical services communications to other eligible persons through direct participation in and direct operational control of the system, such as through central dispatch service.

(b) [Reserved]

[43 FR 54791, Nov. 22, 1978, as amended at 47 FR 19538, May 6, 1982; 48 FR 9272, Mar. 4, 1983; 48 FR 26620, June 9, 1983; 49 FR 36376, Sept. 17, 1984]

§90.37 Rescue organizations.

(a) *Eligibility.* Persons or organizations operating a rescue squad are eligible to hold authorizations to operate radio stations for transmission of messages pertaining to the safety of life or property and urgent messages necessary for the rendition of an efficient emergency rescue service.

(b) *Class and number of stations available.* Each rescue squad will normally be authorized to operate one base station, and a number of mobile units (excluding hand carried mobile units) not exceeding the number of vehicles actually used in emergency rescue operations. In addition, each rescue squad will be authorized to operate a number of hand carried mobile units not exceeding two such units for each radio equipped vehicle actually used in emergency rescue operations.

[43 FR 54791, Nov. 22, 1978; 45 FR 43418, June 27, 1980]

§90.38 Physically handicapped.

(a) *Eligibility.* (1) Any person having a hearing deficiency such that average hearing threshold levels are 90 dB above ANSI (American National Standards Institute) 1969 or ISO (International Standards Organization) 1964 levels and such other persons who submit medical certification of similar hearing deficiency.

(2) Any person having visual acuity corrected to no better than 20/200 in the better eye or having a field of vision of less than 20 degrees.

(3) Any person, who, through loss of limbs or motor function, is confined to a wheelchair, or is nonambulatory.

(4) Any person actively awaiting an organ transplant.

(5) Parents or guardians of persons under 18 years eligible under (1), (2), (3), or institutions devoted to the care or training of those persons.

(b) *Special eligibility showing.* The initial application from a person claiming eligibility under paragraph (a) shall be accompanied by a statement from a physician attesting to the condition of the applicant or the applicant's child (or ward in case of guardianship).

[46 FR 15276, Mar. 5, 1981, as amended at 57 FR 45751, Oct. 5, 1992]

§90.39 Veterinarians.

(a) *Eligibility.* A veterinarian, veterinary clinic, or a school of veterinary medicine is eligible to hold authorizations to operate radio stations for the transmission of messages pertaining to the care and treatment of animals.

(b) *Class and number of stations available.* Each licensee may be authorized to operate one base station and two mobile units. Additional base stations or mobile units will be authorized only on a showing of need.

§90.41 Disaster relief organizations.

(a) *Eligibility.* Organizations established for disaster relief purposes having an emergency radio communications plan are eligible to hold authorizations to operate radio stations for the transmission of communications re-

lating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of emergency situations during periods of actual or impending emergency, or disaster, and until substantially normal conditions are restored. In addition, the stations may be used for training exercises, incidental to the emergency communications plan, and for operational communications of the disaster relief organization or its chapter affiliates.

(b) *Special eligibility showing.* The initial application from a disaster relief organization shall be accompanied by a copy of the charter or other authority under which the organization was established and a copy of its communications plan. The plan shall fully describe the operation of the radio facilities and describe the method of intergration into other communications facilities which normally would be available to assist in the alleviation of the emergency condition.

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 9272, Mar. 4, 1983; 62 FR 15992, Apr. 3, 1997]

§90.43 School buses.

(a) *Eligibility.* Persons or organizations operating school buses on a regular basis over regular routes are eligible to hold authorizations to operate radio stations for the transmission of messages pertaining to either the efficient operation of the school bus service or the safety or general welfare of the students they are engaged in transporting.

(b) *Class and number of stations available.* Each school bus operator may be authorized to operate one base station and a number of mobile units not in excess of the total of the number of buses and maintenance vehicles regularly engaged in the school bus operation. Additional base stations or mobile units will be authorized only in exceptional circumstances when the applicant can show a specific need.

§90.45 Beach Patrols.

(a) *Eligibility.* Persons or organizations operating beach patrols having responsibility for life-saving activities are eligible to hold authorizations to operate radio stations for the transmission of messages required for the safety of life or property.

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 9272, Mar. 4, 1983]

§90.47 Establishment in isolated areas.

(a) *Eligibility.* Persons or organizations maintaining establishment in isolated areas where public communications facilities are not available and where the use of radio is the only feasible means of establishing communication with a center of population, or other point from which emergency assistance might be obtained if needed, are eligible to hold authorizations to operate radio stations for the transmission of messages only

during an actual or impending emergency endangering life, health or property for the transmission of essential communications arising from the emergency. The transmission of routine or non-emergency communications is strictly prohibited.

(b) *Special eligibility showing.* The initial application requesting a station authorization for an establishment in an isolated area shall be accompanied by a statement describing the status of public communication facilities in the area of the applicant's establishment; the results of any attempts the applicant may have made to obtain public communication service, and; in the event radio communications service is to be furnished under subparagraph (d)(2) of this section, a copy of the agreement involved must be submitted.

(c) *Class and number of stations available.* Persons or organizations in this category may be authorized to operate not more than one fixed station at any isolated establishment and not more than one fixed station in a center of population.

(d) *Communication service rendered and received.* (1) The licensee of a station at any establishment in an isolated area shall make the communication facilities of such station available at no charge to any person desiring the transmission of any communication permitted by paragraph (a) of this section.

(2) For the purpose of providing the communications link desired the licensee of a station at an establishment in an isolated area either may be the licensee of a similar station at another location or may obtain communication service under a mutual agreement from the licensee of any station in the Public Safety or Special Emergency Radio Services or any other station which is authorized to communicate with the special emergency fixed station.

§ 90.49 Communications standby facilities.

(a) *Eligibility.* A communications common carrier operating communications circuits that normally carry essential communication of such a nature that their disruption would endanger life or public property is eligible to hold authorizations for standby radio facilities for the transmission of messages only during periods when the normal circuits are inoperative due to circumstances beyond the control of the user. During such periods the radio facilities may be used to transmit any communication which would be carried by the regular circuit.

(b) *Special eligibility showing.* Initial applications for authorization to operate a standby radio facility must include a statement describing radio communication facilities desired, the proposed method of operation, a description of the messages normally being carried, and an explanation of how their disruption will endanger life or public property.

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 9272, Mar. 4, 1983]

§ 90.51 Emergency repair of public communications facilities.

(a) *Eligibility.* Communications common carriers are eligible in this service for radio facilities to be used in effecting expeditious repairs to interruption of public communications facilities where such interruptions have resulted in disabling intercity circuits or service to a multiplicity of subscribers in a general area. Stations authorized under this section may be used only when no other means of communication is readily available, for the transmission of messages relating to the safety of life and property and messages which are necessary for the efficient restoration of the public communication facilities which have been disrupted.

(b) [Reserved]

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 9272, Mar. 4, 1983]

§ 90.53 Frequencies available.

(a) The following table indicates frequencies available for assignment to stations in the Special Emergency Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (b) of this section. (Frequencies below 450 MHz indicated for base or mobile stations may be authorized to fixed stations on a secondary basis to stations in the mobile service):

SPECIAL EMERGENCY SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
2000–3000	Fixed .....	.....
2726	Base or mobile	2
3201 .....	.....do .....	.....
Megahertz		
33.02 .....	.....do	3, 25
33.04 .....	.....do	25
33.06 .....	.....do	3, 25
33.08 .....	.....do	25
33.10 .....	.....do	3, 25
35.02	Mobile	27
35.64	Base	4
35.68 .....	.....do	4
37.90	Base or mobile	3, 25
37.94 .....	.....do	3, 25
37.98 .....	.....do	3, 25
43.64	Base	4, 28
43.68 .....	.....do	4
45.92	Base or mobile	25
45.96 .....	.....do	25
46.00 .....	.....do	25
46.04 .....	.....do	25
47.42 .....	.....do	5, 25
47.46 .....	.....do	25
47.50 .....	.....do	25
47.54 .....	.....do	25
47.58 .....	.....do	25
47.62 .....	.....do	25
47.66 .....	.....do	25
72.00 to 76.00	Operational fixed	6
150 to 170	Base or mobile	36, 39
152.0075	Base	4, 31, 37

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SPECIAL EMERGENCY SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
155.160	Base or mobile	25
155.1675 .....	.....do	25, 30
155.175 .....	.....do	25
155.1825 .....	.....do	25, 30
155.205 .....	.....do	25
155.2125 .....	.....do	25, 30
155.220 .....	.....do	25
155.2275 .....	.....do	25, 30
155.235 .....	.....do	25
155.2425 .....	.....do	25, 30
155.265 .....	.....do	25
155.2725 .....	.....do	25, 30
155.280 .....	.....do	25
155.2875 .....	.....do	25, 30
155.295 .....	.....do	25
155.3025 .....	.....do	25, 30
157.450 .....	.....do	4, 11, 37
163.250 .....	.....do	4, 37
169–172	Mobile	33
450–470	Fixed, base, or mobile	12, 36
453.0125	Mobile	38
453.025	Base	26
453.075 .....	.....do	26
453.125 .....	.....do	26
453.175 .....	.....do	26
458.0125	Mobile	38
458.0375 .....	.....do	38
458.0625 .....	.....do	38
458.0875 .....	.....do	38
458.1125 .....	.....do	38
458.1375 .....	.....do	38
458.1625 .....	.....do	38
458.1875 .....	.....do	38
460.5125 .....	.....do	38
460.5375 .....	.....do	38
460.5625 .....	.....do	38
462.9375 .....	.....do	38
462.9625 .....	.....do	38
462.9875 .....	.....do	38
463.0125 .....	.....do	38
463.0375 .....	.....do	38
463.0625 .....	.....do	38
463.0875 .....	.....do	38
463.1125 .....	.....do	38
463.1375 .....	.....do	38
463.1625 .....	.....do	38
463.1875 .....	.....do	38
465.5125 .....	.....do	38
465.5375 .....	.....do	38
465.5625 .....	.....do	38
467.9375 .....	.....do	38
467.9625 .....	.....do	38
467.9875 .....	.....do	38
468.0125 .....	.....do	38
468.0375 .....	.....do	38
468.0625 .....	.....do	38
468.0875 .....	.....do	38
468.1125 .....	.....do	38
468.1375 .....	.....do	38
468.1625 .....	.....do	38
468.1875 .....	.....do	38
806 to 824	Mobile	21
851 to 869	Base or mobile	21
928 and above	Operational fixed	22
929 to 930	Base only	7
1427 to 1435	Operational fixed, base or mobile	23
2450 to 2500	Base or mobile	24
10,550 to 10,680 .....	.....do	9

(b) Explanation of assignment limitations appearing in the frequency table of paragraph (a) of this section:

(1) Appropriate frequencies in the band 2000–3000 kHz which are designated in part 80 of this chapter as available to Public Ship Stations for telephone communications with Public Coast Stations may be assigned on a secondary basis to Special Emergency fixed Stations for communication with Public

Coast Stations only, provided such stations are located in the United States and the following conditions are met:

(i) That such fixed station is established pursuant to the eligibility provisions of §90.47 and that the isolated area involved is an island or other location not more than 480 km (300 statute miles) removed from the desired point of communication and isolated from that point by water.

(ii) That evidence is submitted showing that an arrangement has been made with the coast station licensee for the handling of emergency communications permitted by §§80.453 and 90.47(d) of this chapter.

(iii) That operation of the Special Emergency fixed station shall at no time conflict with any provision of part 80 of this chapter and further, that such operation in general shall conform to the practices employed by Public Ship Stations for radiotelephone communication with the same Public Coast Station.

(2) This frequency is shared with the Local Government Radio Service where it is available for State Guard operations.

(3) This frequency is shared with the Highway Maintenance Radio Service.

(4) This frequency will be assigned only for one-way paging communications to mobile receivers. Transmissions for the purpose of activating or controlling remote objects on this frequency are not authorized.

(5) Thus frequency is reserved for assignment only to national organizations eligible for disaster relief operations under §90.41.

(6) The frequencies available for use at operational-fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(7) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(8) [Reserved]

(9) The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(10) [Reserved]

(11) Operations on this frequency are limited to 30 watts transmitter output power.

(12) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(13)–(20) [Reserved]

(21) Subpart S contains rules for assignment of frequencies in the 806–824 MHz and 851–869 MHz bands.

(22) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(23) This frequency band is available in this service subject to the provisions of §90.259.

(24) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to the existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(25) A licensee regularly conducting two-way communication operations on this frequency may, on a secondary basis, also transmit one-way alert-paging signals to ambulance and rescue squad personnel.

(26) Paging licensees as of March 20, 1991, may continue to operate on a primary basis until January 14, 1998.

(27) This frequency is available in this service only to persons eligible under the provisions of §90.38(a) for operation of transmitters having a maximum power output of three watts using A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission. This frequency is also available in the Business Radio Service on a co-equal basis with the Special Emergency Radio Service users.

(28) No new licenses will be granted for one-way paging under §90.487 for use on this frequency after August 1, 1980. This frequency is available to persons eligible for station licenses under the provisions of §90.38(a) on a co-equal basis with one-way paging users under §90.487 prior to August 1, 1985, and on a primary basis after August 1, 1985. Only A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, G2D emissions and power not exceeding 10 watts will be authorized. Antennas having gain greater than 0 dBd will not be authorized. Transmissions shall not exceed two seconds duration.

(29) [Reserved]

(30) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(31) This frequency is removed by 22.5 kHz from frequencies assigned to other radio services. Utilization of this frequency may result in, as well as be subject to, interference under certain operating conditions. In considering the use of this frequency, adjacent channel operations should be taken into consideration. If interference occurs, the licensee may be required to take the necessary steps to resolve the problem. See §90.173(b).

(32) [Reserved]

(33) Frequencies in this band will be assigned for low power wireless microphones in accordance with provisions of §90.265.

(34) [Reserved]

(35) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(36) Assignment of frequencies in this band are subject to the provisions of §90.173.

(37) This frequency will be authorized a channel bandwidth of 25 kHz.

(38) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(39) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(c) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also §90.253).

(1) Substitution of frequencies available below 25 MHz may be made in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) The frequency bands 31.99 to 32.00 MHz, 33.00 to 33.01 MHz, 33.99 to 34.00 MHz, 37.93 to 38.00 MHz, 39.00 to 39.01 MHz, 39.99 to 40.00 MHz and 42.00 to 42.01 MHz are available for assignment for developmental operation subject to the provisions of subpart Q.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(d) *Limitation on number of frequencies assignable.* Normally only one frequency below 450 MHz will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with the operation of mobile repeaters in accordance with §90.247, notwithstanding this limitation.

(2) An additional frequency may be assigned for paging operations from those frequencies available under §90.53(b)(4).

(3) The frequency 155.340 MHz may be assigned as an additional frequency when it is designated as a mutual assistance frequency as provided in §90.53(b)(10).

(4) Additional frequencies may be assigned for fixed station operations.

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(5) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307; secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.53, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.55 Paging operations.

Paging operations may be authorized in this service only on frequencies assigned under the provisions of § 90.53(b)(4), (7), (25) and (26). Paging operations on other frequencies authorized before August 15, 1974, may be continued only if they do not cause harmful interference to regular operations on the same frequencies. Such paging operations may be renewed indefinitely on a secondary basis to regular operations, except within 125 kilometers (75 mi.) of the following urbanized areas:

Urbanized area	North latitude	West longitude
New York, NY-Northeastern NJ	40–45–06	73–59–39
Los Angeles-Long Beach, CA	34–03–15	118–14–28
Chicago, IL	41–52–28	87–38–22
Philadelphia, PA-NJ	39–56–58	75–09–21
Detroit, MI	42–19–48	83–02–57
San Francisco-Oakland, CA	37–46–39	122–24–40
Boston, MA	42–21–24	71–03–25
Washington, DC-MD-VA	38–53–51	77–00–33
Cleveland, OH	41–29–51	81–41–50
St. Louis, MO-IL	38–37–45	90–12–22
Pittsburgh, PA	40–26–19	80–00–00
Minneapolis-St. Paul, MN	44–58–57	93–15–43
Houston, TX	29–45–26	95–21–37
Baltimore, MD	39–17–26	76–36–45
Dallas, TX	32–47–09	96–47–37
Milwaukee, WI	43–02–19	87–54–15
Seattle-Everett, WA	47–36–32	122–20–12
Miami, FL	25–46–37	80–11–32
San Diego, CA	32–42–53	117–09–21
Atlanta, GA	33–45–10	84–23–37
Cincinnati, OH-KY	39–06–07	84–30–35
Kansas City, MO-KS	39–04–56	94–35–20
Buffalo, NY	42–52–52	78–52–21
Denver, CO	39–44–58	104–59–22
San Jose, CA	37–20–16	121–53–24
Tampa-St. Petersburg, FL	27–51–48	82–33–11
Phoenix, AZ	33–41–10	111–31–15

[45 FR 13087, Feb. 28, 1980; 45 FR 43418, June 27, 1980, as amended at 50 FR 39678, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 58 FR 12181, Mar. 3, 1993]

Subpart D—Industrial Radio Services

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, subpart D, consisting of §§ 90.59–90.81, was removed and reserved, effective Oct. 17, 1997.

§ 90.59 Scope.

The Industrial Radio Services include the Power, Petroleum, Forest Products, Film and Video Production, Relay Press, Special Industrial, Business, Manufacturers, and Telephone Maintenance Radio Services. Rules as to eligibility for licensing, specific frequencies available, and any special requirements as to each of these radio services are set forth in the following sections.

[43 FR 54791, Nov. 22, 1978, as amended at 58 FR 31476, June 3, 1993]

§ 90.61 General eligibility.

(a) In addition to the eligibility shown in each Industrial Radio Service, eligibility is also provided for any corporation proposing to furnish non-profit radiocommunication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary provided the party served is regularly engaged in any of the eligibility activities set forth in the particular service involved. This corporate eligibility is not subject to the cooperative use provisions of § 90.179.

(b) Eligibility is also provided for a nonprofit corporation or association that is organized for the purpose of furnishing a radio communications service to persons actually engaged in any of the eligibility activities set forth in the particular service involved. Such use is subject to the cooperative use provisions of § 90.179.

[47 FR 19533, May 6, 1982]

§ 90.63 Power Radio Service.

(a) *Eligibility.* Persons primarily engaged in any of the following activities are eligible to hold authorizations in the Power Radio Service to operate radio stations for transmission of communications essential to such activities of the licensee:

(1) The generation, transmission, or distribution of electrical energy for use by the general public or by the members of a cooperative organization.

(2) The distribution of manufactured or natural gas by means of pipe line, for use by the general public or by the members of a cooperative organization, or, in a combination of that activity with the production, transmission or storage of manufactured or natural gas preparatory to such distribution.

(3) The distribution of steam by means of pipeline or, of water by means of pipeline, canal, or open ditch, for use by the general public or by the members of a cooperative organization, or in a combination of that activity with the collection, transmission, storage, or purification of water or the generation of steam preparatory to such distribution.

(4) The providing of a supporting service by a corporation directly related to activities of its parent corporation, of another subsidiary of the same parent, or of its own subsidiary, where the party served is regularly engaged in any of the eligibility activities set forth in this section.

(b) *Special use of service.* (1) Radio facilities licensed to an electric power entity, in addition to being used primarily for the installation and maintenance of the electric power system, may also be used for the installation and maintenance of any other wireline facilities where such facilities employ in whole or in part the same pole line or duct distribution system as that of the electric power entity and where the licensee has the responsibility to maintain such additional wireline facilities through common ownership or contractual arrangement.

(2) Persons licensed under the provisions of paragraph (a)(2) of this section may utilize their radio facilities in conjunction with the supplying of liquefied petroleum gas to consumers in areas beyond gas distribution pipelines.

(c) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Power Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (d) of this section:

POWER RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
2000 to 25,000	Fixed, base or mobile	1
2292	Base or mobile	1
2398 .....	.....do	1
4637.5 .....	.....do	1
Megahertz		
37.46 .....	.....do	.....
37.48 .....	.....do	.....
37.50 .....	.....do	.....
37.52 .....	.....do	.....
37.54 .....	.....do	.....
37.56 .....	.....do	.....
37.58 .....	.....do	.....
37.60	Base, mobile or operational fixed.	2
37.62	Base or mobile	.....
37.64 .....	.....do	.....
37.66 .....	.....do	.....
37.68 .....	.....do	.....
37.70 .....	.....do	.....
37.72 .....	.....do	.....
37.74 .....	.....do	.....
37.76 .....	.....do	.....
37.78 .....	.....do	.....
37.80 .....	.....do	.....
37.82 .....	.....do	.....
37.84	Operational fixed, base or mobile.	2
37.86	Base or mobile	.....
47.70 .....	.....do	.....
47.72 .....	.....do	.....
47.74 .....	.....do	.....
47.76 .....	.....do	.....
47.78 .....	.....do	.....
47.80 .....	.....do	.....
47.82 .....	.....do	.....
47.84 .....	.....do	.....
47.86 .....	.....do	.....
47.88 .....	.....do	.....
47.90 .....	.....do	.....
47.92 .....	.....do	.....
47.94 .....	.....do	.....
47.96 .....	.....do	.....
47.98 .....	.....do	.....
48.00 .....	.....do	.....
48.02 .....	.....do	.....
48.04 .....	.....do	.....
48.06 .....	.....do	.....
48.08 .....	.....do	.....
48.10 .....	.....do	.....
48.12 .....	.....do	.....
48.14 .....	.....do	.....
48.16 .....	.....do	.....
48.18 .....	.....do	.....
48.20 .....	.....do	.....
48.22 .....	.....do	.....
48.24 .....	.....do	.....
48.26 .....	.....do	.....
48.28do
48.30do
48.32do
48.34do
48.36do
48.38do
48.40do
48.42do
48.44do
48.46do

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POWER RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
48.48 .....	.....do .....	.....
48.50 .....	.....do .....	.....
48.52 .....	.....do .....	.....
48.54 .....	.....do .....	.....
72.00 to 76.00	Operational fixed	3
74.61	Mobile	27
74.63 .....	.....do	27
74.65 .....	.....do	27
74.67 .....	.....do	27
74.69 .....	.....do	27
74.71 .....	.....do	27
74.73 .....	.....do	27
74.75 .....	.....do	27
74.77 .....	.....do	27
74.79 .....	.....do	27
75.21 .....	.....do	27
75.23 .....	.....do	27
75.25 .....	.....do	27
75.27 .....	.....do	27
75.29 .....	.....do	27
75.31 .....	.....do	27
75.33 .....	.....do	27
75.35 .....	.....do	27
75.37 .....	.....do	27
75.39 .....	.....do	27
150 to 170	Base or mobile	29, 31
153.410 .....	.....do .....	.....
153.4175 .....	.....do	24
153.425 .....	.....do	4
153.4325 .....	.....do	4, 24
153.440 .....	.....do	5
153.4475 .....	.....do	5, 24
153.455 .....	.....do	4
153.4625 .....	.....do	4, 24
153.470 .....	.....do .....	.....
153.4775 .....	.....do	24
153.485 .....	.....do	4
153.4925 .....	.....do	4, 24
153.500 .....	.....do	5
153.5075 .....	.....do	5, 24
153.515 .....	.....do	4
153.5225 .....	.....do	4, 24
153.530 .....	.....do .....	.....
153.5375 .....	.....do	24
153.545 .....	.....do	4
153.5525 .....	.....do	4, 24
153.560 .....	.....do	5
153.5675 .....	.....do	5, 24
153.575 .....	.....do	4
153.5825 .....	.....do	4, 24
153.590 .....	.....do .....	.....
153.5975 .....	.....do	24
153.605 .....	.....do	4
153.6125 .....	.....do	4, 24
153.620 .....	.....do	5
153.6275 .....	.....do	5, 24
153.635 .....	.....do	4
153.6425 .....	.....do	4, 24
153.650 .....	.....do .....	.....
153.6575 .....	.....do	24
153.665 .....	.....do	4
153.6725 .....	.....do	4, 24
153.680 .....	.....do	5
153.6875 .....	.....do	5, 24
153.695 .....	.....do .....	.....
153.7025 .....	.....do	24
153.710 .....	.....do .....	.....
153.7175 .....	.....do	24
153.725 .....	.....do .....	.....
153.7325 .....	.....do	24

POWER RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
154.45625	Fixed or mobile	7, 21, 22, 23
154.46375 .....	.....do	6, 7, 21
154.47125 .....	.....do	7, 11, 21, 22
154.47875 .....	.....do	7, 21, 22, 23
158.1225	Base or mobile	28
158.130 .....	.....do .....	.....
158.1375 .....	.....do	24
158.145 .....	.....do	8
158.1525 .....	.....do	8, 24
158.160 .....	.....do	9
158.1675 .....	.....do	9, 24
158.175 .....	.....do	8
158.1825 .....	.....do	8, 24
158.190 .....	.....do .....	.....
158.1975 .....	.....do	24
158.205 .....	.....do	8, 24
158.2125 .....	.....do	8
158.220 .....	.....do	9, 24
158.2275 .....	.....do	9
158.235 .....	.....do	8, 24
158.2425 .....	.....do	8
158.250 .....	.....do .....	.....
158.2575 .....	.....do	24
158.265 .....	.....do	8
158.2725 .....	.....do	8, 24
169–172	Mobile, operational fixed.	10
173.20375	Fixed or mobile	7, 11, 21, 22
173.2100 .....	.....do	11, 12, 21, 22
173.2375 .....	.....do	7, 21, 22, 23
173.250	Base or mobile	9
173.2625	Fixed or mobile	7, 21, 22, 23
173.2875 .....	.....do	7, 21, 22, 23
173.300	Base or mobile	9
173.3125	Fixed or mobile	7, 21, 22, 23
173.3375 .....	.....do	7, 21, 22, 23
173.350	Base or mobile	9
173.3625	Fixed or mobile	7, 21, 22, 23
173.3900 .....	.....do	11, 12, 21, 22
173.39625 .....	.....do	7, 11, 21, 22
216–220	Base and mobile	13
220–222	Base and mobile	26
406–413	Operational fixed	10
450–470	Fixed, base, or mobile	14, 29
451.01875	Base or mobile	28
451.025 .....	.....do .....	.....
451.03125 .....	.....do	28
451.03750 .....	.....do	24
451.04375 .....	.....do	28
451.050 .....	.....do .....	.....
451.05625 .....	.....do	28
451.06250 .....	.....do	24
451.06875 .....	.....do	28
451.075 .....	.....do .....	.....
451.08125 .....	.....do	28
451.08750 .....	.....do	24
451.09375 .....	.....do	28

POWER RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
451.100 .....	.....do .....	.....
451.10625 .....	.....do	28
451.11250 .....	.....do	24
451.11875 .....	.....do	28
451.125 .....	.....do .....	.....
451.13125 .....	.....do	28
451.13750 .....	.....do	24
451.14375 .....	.....do	28
451.150 .....	.....do .....	.....
451.15625 .....	.....do	28
451.16250 .....	.....do	24
451.16875 .....	.....do	28
451.175 .....	.....do	15
451.18125 .....	.....do	15, 28
451.18750 .....	.....do	15, 24
451.19375 .....	.....do	15, 28
451.200 .....	.....do .....	.....
451.20625 .....	.....do	28
451.21250 .....	.....do	24
451.21875 .....	.....do	28
451.225 .....	.....do	15
451.23125 .....	.....do	15, 28
451.23750 .....	.....do	15, 24
451.24375 .....	.....do	15, 28
451.250 .....	.....do .....	.....
451.25625 .....	.....do	28
451.26250 .....	.....do	24
451.26875 .....	.....do	28
451.275 .....	.....do	15
451.28125 .....	.....do	15, 28
451.28750 .....	.....do	15, 24
451.29375 .....	.....do	15, 28
451.3625	Mobile	30
451.375	Base and mobile	15
451.38125 .....	.....do	28
451.38750 .....	.....do	24
451.39375 .....	.....do	28
451.4125	Mobile	30
451.425	Base or mobile	15
451.431251 .....	.....do	15, 28
451.43750 .....	.....do	15, 24
451.44375 .....	.....do	15, 28
451.4625	Mobile	30
451.475	Base or mobile	15
451.48125 .....	.....do	28
451.48750 .....	.....do	24
451.49375 .....	.....do	28
451.5125	Mobile	30
451.525	Base or mobile	15
451.53125 .....	.....do	15, 28
451.53750 .....	.....do	15, 24
451.54375 .....	.....do	15, 28
451.5625	Mobile	30
451.575	Base or mobile	15
451.58125 .....	.....do	15, 28
451.58750 .....	.....do	15, 24
451.59375 .....	.....do	15, 28
451.6125	Mobile	30
451.625	Base or mobile	15
451.63125 .....	.....do	15, 28
451.63750 .....	.....do	15, 24
451.64375 .....	.....do	15, 28
451.6625	Mobile	30
451.675	Base or mobile	15
451.68125 .....	.....do	15, 28
451.68750 .....	.....do	15, 24
451.69375 .....	.....do	15, 28
456.01875 .....	.....do	28
456.025	Mobile .....	.....
456.03125 .....	.....do	28

POWER RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
456.03750 .....	.....do	24
456.04375 .....	.....do	28
456.050 .....	.....do .....	.....
456.05625 .....	.....do	28
456.06250 .....	.....do	24
456.06875 .....	.....do	28
456.075 .....	.....do .....	.....
456.08125 .....	.....do	28
456.08750 .....	.....do	24
456.09375 .....	.....do	28
456.100 .....	.....do .....	.....
456.10625 .....	.....do	28
456.11250 .....	.....do	24
456.11875 .....	.....do	28
456.125 .....	.....do .....	.....
456.13125 .....	.....do	28
456.13750 .....	.....do	24
456.14375 .....	.....do	28
456.150 .....	.....do .....	.....
456.15625 .....	.....do	28
456.16250 .....	.....do	24
456.16875 .....	.....do	28
456.175 .....	.....do	15
456.18125 .....	.....do	15, 28
456.18750 .....	.....do	15, 24
456.19375 .....	.....do	15, 28
456.200 .....	.....do .....	.....
456.20625 .....	.....do	28
456.21250 .....	.....do	24
456.21875 .....	.....do	28
456.225 .....	.....do	15
456.23125 .....	.....do	15, 28
456.23750 .....	.....do	15, 24
456.24375 .....	.....do	15, 28
456.250 .....	.....do .....	.....
456.25625 .....	.....do	28
456.26250 .....	.....do	24
456.26875 .....	.....do	28
456.275 .....	.....do	15
456.28125 .....	.....do	15, 28
456.28750 .....	.....do	15, 24
456.29375 .....	.....do	15, 28
456.3625	Mobile	30
456.375 .....	.....do	15
456.38125 .....	.....do	15, 28
456.38750 .....	.....do	15, 24
456.39375 .....	.....do	15, 28
456.4125 .....	.....do	30
456.425 .....	.....do	15
456.43125 .....	.....do	15, 28
456.43750 .....	.....do	15, 24
456.44375 .....	.....do	15, 28
456.4625 .....	.....do	30
456.475 .....	.....do	15
456.48125 .....	.....do	15, 28
456.48750 .....	.....do	15, 24
456.49375 .....	.....do	15, 28
456.5125 .....	.....do	30
456.525 .....	.....do	15
456.53125 .....	.....do	15, 28
456.53750 .....	.....do	15, 24
456.54375 .....	.....do	15, 28
456.5625 .....	.....do	30
456.575 .....	.....do	15
456.58125 .....	.....do	15, 28
456.58750 .....	.....do	15, 24
456.59375 .....	.....do	15, 28
456.6125 .....	.....do	30
456.625 .....	.....do	15
456.63125 .....	.....do	15, 28

POWER RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
456.63750 .....	.....do	15, 24
456.64375 .....	.....do	15, 28
456.6625 .....	.....do	30
456.675 .....	.....do	15
456.68125 .....	.....do	15, 28
456.68750 .....	.....do	15, 24
456.69375 .....	.....do	15, 28
462.4625 .....	.....do	30
462.475	Base or mobile	15
462.48125 .....	.....do	15, 28
462.48750 .....	.....do	15, 24
462.49375 .....	.....do	15, 28
462.5125	Mobile	30
462.525	Base or mobile	15
462.53125 .....	.....do	15, 28
467.4625	Mobile	30
467.475 .....	.....do	15
467.48125 .....	.....do	15, 28
467.48750 .....	.....do	15, 24
467.49375 .....	.....do	15, 28
467.5125 .....	.....do	30
467.525 .....	.....do	15
467.53125 .....	.....do	15, 28
470 to 512	Base or mobile	16
806 to 821	Mobile	17
851 to 866	Base or mobile	17
896 to 901	Mobile	17
928 and above	Operational fixed	18
929–930	Base only	25
935 to 940	Base or mobile	17
1427 to 1435	Base, mobile or operational fixed.	13
2450 to 2500	Base or mobile	19
8400 to 8500 .....	.....do	20
10,550 to 10,680*	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(d) Explanation of assignment limitations appearing in the frequency tabulation of paragraph (c) of this section:

(1) Only utilities and power pools engaged in the distribution of electric power, or the distribution of by pipeline of fuels or water are eligible to use this spectrum, and then only in accordance with §90.266. Except as provided in this part, licensees may not use these frequencies in the place of other operational circuits permitted by the Commission's Rules. Circuits operating on these frequencies may be used only for the following purposes:

(i) Providing backup standby communications for circuits which have been disrupted and which are used for coordinating inter-utility, intra-utility, and power pool distribution of electric power; or,

(ii) Coordinating the repair of inter-utility, intra-utility, and power pool

electric power distribution networks, or the repair of pipelines.

(2) This frequency may be assigned only to stations operating in an interconnected or coordinated utility system in accordance with an operational communications plan which sets forth all points of communications. Authorizations at variance with an established operational communications plan will be made only on a secondary basis.

(3) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(4) This frequency is shared with the Forest Products and Petroleum Radio Services in the States of Arkansas, Louisiana, Oklahoma, and Texas.

(5) This frequency is not available for assignment in this service in the States of Arkansas, Louisiana, Oklahoma, and Texas. In these States, this frequency is available to the Petroleum and Forest Products Radio Services.

(6) This frequency is available for assignment to multiple address fixed stations employing omnidirectional antennas used for Power Utility peak load shaving and shedding and to mobile stations used for the remote control of objects and devices. The maximum power that may be authorized to fixed stations is 300 watts output, and the maximum power that may be authorized for mobile stations is 1 watt output. This frequency may also be assigned to operational fixed stations employing directional antenna systems (front-to-back ratio of 20 dB) when such stations are located at least 120 km. (75 mi.) from the boundaries of any urbanized area of 200,000 or more population. (U.S. Census of Population, 1960). The maximum power output of the transmitter for such fixed stations may not exceed 50 watts. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(7) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 2.8 kHz and the maximum

frequency deviation may not exceed 2.5 kHz. For AM transmitters the highest modulating frequency may not exceed 2.0 kHz. The carrier frequency must be maintained within 0.0005 percent, and the authorized bandwidth may not exceed 6 kHz.

(8) This frequency is shared with Forest Products and Petroleum Radio Services in the States of Arkansas, Louisiana, Oklahoma, Oregon, Texas, and Washington.

(9) This frequency is not available for assignment in this service in the States of Arkansas, Louisiana, Oklahoma, Oregon, Texas, and Washington. In these States this frequency is available only in the Petroleum and Forest Products Radio Services.

(10) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of § 90.265.

(11) The maximum output power of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobiles. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(12) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 1.7 kHz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1.2 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 3 kHz.

(13) This band is available to stations operating in this service subject to the provisions of § 90.259.

(14) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(15) This frequency is available on a shared basis in the Power, Petroleum, Forest Products, Manufacturers, and Telephone Maintenance Radio Services. It may be assigned only when all of the frequencies in the 450–470 MHz band allocated to the service in which the applicant is primarily eligible are assigned within 56 km. (35 mi) of the proposed base station.

(16) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(17) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(18) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(19) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(20) Use of frequencies in this band is limited to developmental operation and is subject to the provisions of subpart Q.

(21) This frequency is available on a shared basis with the Local Government, Petroleum, Forest Products, Special Industrial, Business and Manufacturers Radio Services for remote control and telemetry operations.

(22) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 dB. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160° of azimuth.

(23) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations. The height of the antenna system may not exceed 15.24 meters (50 ft.) above the ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(24) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(25) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(26) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(27) This frequency is available on a shared basis with the Petroleum, Business, Manufacturers, and Railroad Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries or confines of a power plant, factory, liquified natural gas facility, shipyard, mine, substation, pumping station, or operations control room. Operations on this frequency are subject to the provisions of §90.257(b). Pulsed modulations will not be authorized.

(28) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(29) Assignment of frequencies in this band are subject to the provisions of §90.173.

(30) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(31) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(e) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also §90.253.)

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) Persons eligible under the provisions of paragraph (a)(2) of this section who are engaged in the distribution of

natural gas directly to consumers and who have a substantial requirement for mobile service communication with a gas supplier may be authorized to operate on the Petroleum Radio Service frequency or frequencies assigned to the supplier. However, such operation shall be limited to communications in a local area common to both parties, and shall relate only to gas supply and distribution activities. The application of any person seeking a frequency assignment under the provisions of this paragraph shall be accompanied by a written statement from the natural gas supplier which concurs in the need for such intercommunication and consents to the use by the natural gas distributor of the frequency or frequencies involved.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(f) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with §90.247 notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for developmental operation by applicants in this service subject to the provisions of subpart Q, notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(g) The frequencies 10–490 kHz are used to operate electric utility Power Line Carrier (PLC) systems on power transmission lines for communications essential to the reliability and security

of electric service to the public, in accordance with part 15 of this chapter. Any electric utility fulfilling requirements in paragraph (a)(1) of this section may operate PLC systems and shall supply to a Federal Communications Commission/National Telecommunications and Information Administration recognized industry-operated entity, information on all existing, changes to existing, and proposed systems for inclusion in a data base. Such information shall include the frequency, power, location of transmitter(s), location of receivers and other technical and operational parameters, which would characterize the system's potential both to interfere with authorized radio users, and to receive harmful interference from these users. In an agreed upon format, the industry-operated entity shall inform the National Telecommunications and Information Administration and the Commission of these system characteristics prior to implementation of any proposed PLC system and shall provide monthly or periodic lists with supplements of PLC systems. The Federal Communications Commission and National Telecommunications and Information Administration will supply appropriate application and licensing information to the notification activity regarding authorized radio stations operating in the band. PLC systems in this band operate on a noninterference basis to radio systems assigned frequencies by the NTIA or licensed by the FCC and are not protected from interference due to these radio operations.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.63, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.65 Petroleum Radio Service.

(a) *Eligibility.* Persons primarily engaged in prospecting for, producing, collecting, refining, or transporting by means of pipeline, petroleum or petroleum products (including natural gas) are eligible to hold authorizations in

the Petroleum Radio Service to operate radio stations for transmissions of communications essential to such activities of the licensee: However, persons engaged solely in the containment or cleanup of oil spills will only be assigned those frequencies designated by limitations (6) or (9) in this section.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Petroleum Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

PETROLEUM RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
1614	Base or mobile	1, 2, 3, 4
1628 .....	.....do	1, 2, 3, 4
1652 .....	.....do	1, 2, 3, 4
1676 .....	.....do	1, 2, 3, 4
1700 .....	.....do	1, 2, 3, 4
2000 to 25,000	Fixed, base or mobile	1
2292	Base or mobile	1, 2, 4, 5
2398 .....	.....do	1, 2, 4, 5
4637.5 .....	.....do	1, 2, 4, 5
Megahertz		
25.02 .....	.....do	3, 4
25.04 .....	.....do	6
25.06 .....	.....do	3, 4
25.08 .....	.....do	6, 7
25.10 .....	.....do	3, 4, 7
25.12 .....	.....do .....	.....
25.14 .....	.....do	3, 4
25.16 .....	.....do .....	.....
25.18 .....	.....do	3, 4
25.20 .....	.....do .....	.....
25.22 .....	.....do	4, 5
25.24 .....	.....do .....	.....
25.26 .....	.....do	4, 5
25.28 .....	.....do .....	.....
25.30 .....	.....do	4, 5
25.32 .....	.....do .....	.....
30.66 .....	.....do	4, 5, 8
30.70 .....	.....do	4, 5
30.74 .....	.....do	4, 5, 8
30.78 .....	.....do	4, 5
30.82 .....	.....do	4, 5, 8
31.32 .....	.....do	37
31.40 .....	.....do	37
31.44 .....	.....do	37
31.48 .....	.....do	37
31.52do	37
31.60do	37
31.64do	37
31.72do	37
31.76do	37
33.18do
33.20do
33.22do
33.24do

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PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
33.26 .....	.....do .....	.....
33.28 .....	.....do .....	.....
33.30 .....	.....do .....	.....
33.32 .....	.....do .....	.....
33.34 .....	.....do .....	.....
33.36 .....	.....do .....	.....
33.38 .....	.....do .....	.....
35.48 .....	.....do	37
36.25 .....	.....do	9
41.71 .....	.....do	9
48.56 .....	.....do	10
48.58 .....	.....do	10
48.60 .....	.....do	10
48.62 .....	.....do	10
48.64 .....	.....do	10
48.66 .....	.....do	10
48.68 .....	.....do	10
48.70 .....	.....do	10
48.72 .....	.....do	10
48.74 .....	.....do	10
48.76 .....	.....do	10, 44
48.78 .....	.....do	10
48.80 .....	.....do	10
48.82 .....	.....do	10
48.84 .....	.....do	10, 44
48.86 .....	.....do	10, 44
48.88 .....	.....do	10
48.90 .....	.....do	10
48.92 .....	.....do	10, 44
48.94 .....	.....do	10
48.96 .....	.....do	10
48.98 .....	.....do	10
49.00 .....	.....do	10
49.02 .....	.....do	10, 44
49.04 .....	.....do	10
49.06 .....	.....do	10
49.08 .....	.....do	10, 44
49.10 .....	.....do	10, 44
49.12 .....	.....do	10
49.14 .....	.....do	10
49.16 .....	.....do	10, 44
49.18 .....	.....do	10
49.20 .....	.....do	10, 44
49.22 .....	.....do	10
49.24 .....	.....do	10, 44
49.26 .....	.....do	10
49.28 .....	.....do	10, 44
49.30 .....	.....do	10
49.32 .....	.....do	10
49.34 .....	.....do	10
49.36 .....	.....do	10, 44
49.38 .....	.....do	10
49.40 .....	.....do	10, 44
49.42 .....	.....do	10
49.44 .....	.....do	10
49.46 .....	.....do	10, 44
49.48 .....	.....do	10
49.50 .....	.....do	10, 44
72.00 to 76.00	Operational fixed	11
74.61	Mobile	43
74.63 .....	.....do	43
74.65 .....	.....do	43
74.67 .....	.....do	43
74.69 .....	.....do	43
74.71 .....	.....do	43
74.73 .....	.....do	43
74.75 .....	.....do	43
74.77 .....	.....do	43
74.79 .....	.....do	43
75.21 .....	.....do	43

PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
75.23 .....	.....do	43
75.25 .....	.....do	43
75.27 .....	.....do	43
75.29 .....	.....do	43
75.31 .....	.....do	43
75.33 .....	.....do	43
75.35 .....	.....do	43
75.37 .....	.....do	43
75.39 .....	.....do	43
150 to 170	Base or mobile	45, 48
150.980 .....	.....do	6
150.9875 .....	.....do	6, 41
153.035 .....	.....do	12
153.0425 .....	.....do	12, 41
153.050 .....	.....do	4, 5, 13, 38, 40
153.0575 .....	.....do	4, 5, 13, 38, 40, 41
153.0650 .....	.....do	4, 5, 13, 38, 40
153.065 .....	.....do	13
153.0725 .....	.....do	13, 41
153.080 .....	.....do	4, 5, 13
153.0875 .....	.....do	4, 5, 13, 41
153.095 .....	.....do	13
153.1025 .....	.....do	13, 14
153.110 .....	.....do	4, 5, 13
153.1175 .....	.....do	4, 5, 13, 41
153.125 .....	.....do	13, 38, 40
153.1325 .....	.....do	13, 38, 40, 41
153.140 .....	.....do	4, 5, 13
153.1475 .....	.....do	4, 5, 13, 41
153.155 .....	.....do	13
153.1625 .....	.....do	13, 41
153.170 .....	.....do	4, 5, 13
153.1775 .....	.....do	4, 5, 13, 41
153.185 .....	.....do	13
153.1925 .....	.....do	13, 41
153.200 .....	.....do	4, 5, 13
153.2075 .....	.....do	4, 5, 13, 41
153.215 .....	.....do	13
153.2225 .....	.....do	13, 41
153.230 .....	.....do	4, 5, 13
153.2375 .....	.....do	4, 5, 13, 41
153.245 .....	.....do	13
153.2525 .....	.....do	13, 41
153.260 .....	.....do	4, 5, 13
153.2675 .....	.....do	4, 5, 13, 41
153.275 .....	.....do	13
153.2825 .....	.....do	13, 41
153.290 .....	.....do	4, 5, 13
153.2975 .....	.....do	4, 5, 13, 41
153.305 .....	.....do	13
153.3125 .....	.....do	13, 41
153.320 .....	.....do	4, 5, 13
153.3275 .....	.....do	4, 5, 13, 41
153.335 .....	.....do	13, 38
153.3425 .....	.....do	13, 38, 41

PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
153.350 .....	.....do	4, 5, 13, 38
153.3575 .....	.....do	4, 5, 13, 38, 41
153.365 .....	.....do	13, 38
153.3725 .....	.....do	13, 38, 41
153.380 .....	.....do	13, 38
153.3875 .....	.....do	13, 38, 41
153.395 .....	.....do	13, 38
153.4025 .....	.....do	13, 38, 41
153.425 .....	.....do	14
153.4325 .....	.....do	14, 41
153.440 .....	.....do	10, 15
153.4475 .....	.....do	10, 15, 41
153.455 .....	.....do	14
153.4625 .....	.....do	14, 41
153.485 .....	.....do	14
153.4925 .....	.....do	14, 41
153.500 .....	.....do	10, 15
153.5075 .....	.....do	10, 15, 41
153.515 .....	.....do	14
153.5225 .....	.....do	14, 41
153.545 .....	.....do	14
153.5525 .....	.....do	14, 41
153.560 .....	.....do	10, 15
153.5675 .....	.....do	10, 15, 41
153.575 .....	.....do	14
153.5825 .....	.....do	14, 41
153.605 .....	.....do	14
153.6125 .....	.....do	14, 41
153.620 .....	.....do	10, 15
153.6275 .....	.....do	10, 15, 41
153.635 .....	.....do	14
153.6425 .....	.....do	14, 41
153.665 .....	.....do	14
153.6725 .....	.....do	14, 41
153.680 .....	.....do	10, 15
153.6875 .....	.....do	10, 15, 41
154.45625	Fixed or mobile	16, 18, 24, 34
154.46375 .....	.....do	16, 18, 24, 35, 36
154.47125 .....	.....do	16, 18, 24, 35
154.47875 .....	.....do	16, 18, 24, 34
154.585	Mobile	6, 19
158.145	Base or mobile	20
158.1525 .....	.....do	20, 41
158.160 .....	.....do	10, 21
158.1675 .....	.....do	10, 21, 41
158.175 .....	.....do	20
158.1825 .....	.....do	20, 41
158.205 .....	.....do	20
158.2125 .....	.....do	20, 41
158.220 .....	.....do	10, 21
158.2275 .....	.....do	20, 21, 41
158.235 .....	.....do	20
158.2425 .....	.....do	20, 41

PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
158.265 .....	.....do	20
158.2725 .....	.....do	20, 41
158.280 .....	.....do	13
158.2875 .....	.....do	13, 41
158.295 .....	.....do	13
158.3025 .....	.....do	13, 41
158.310 .....	.....do	4, 5, 13
158.3175 .....	.....do	4, 5, 13, 41
158.325 .....	.....do	13, 38, 40
158.3325 .....	.....do	13, 38, 40, 41
158.355 .....	.....do	10, 39
158.3625 .....	.....do	10, 39, 41
158.370 .....	.....do	4, 5, 10
158.3775 .....	.....do	4, 5, 10, 41
158.415 .....	.....do	13, 38, 40
158.4225 .....	.....do	13, 38, 40, 41
158.430 .....	.....do	4, 5, 13
158.4375 .....	.....do	4, 5, 13, 41
158.445	Mobile	6, 22
159.480	Based or mobile	6
159.4875 .....	.....do	6, 41
169–172	Mobile, operational fixed.	23
173.20375	Fixed or mobile	16, 18, 24, 35
173.2100 .....	.....do	16, 24, 25, 35
173.2375 .....	.....do	16, 18, 24, 34
173.250	Base or mobile	10, 21
173.2625	Fixed or mobile	16, 18, 24, 34
173.2875 .....	.....do	16, 18, 24, 34
173.300	Base or mobile	10, 21
173.3125	Fixed or mobile	16, 18, 24, 34
173.3375 .....	.....do	16, 18, 24, 34
173.350	Base or mobile	10, 21
173.3625	Fixed or mobile	16, 18, 24, 34
173.3900 .....	.....do	16, 24, 25, 35
173.39625 .....	.....do	16, 18, 24, 35
216–220	Base or mobile	26
220–222	Base or mobile	17
406–413	Operational fixed	23
450–470	Fixed, base, or mobile	27, 45
451.1625	Mobile	46
451.175	Base or mobile	28
451.18125 .....	.....do	28, 47
451.18750 .....	.....do	28, 41
451.19375 .....	.....do	28, 47
451.2125	Mobile	46
451.225	Base or mobile	28
451.23125 .....	.....do	28, 47
451.23750do	28, 41
451.24375do	28, 47
451.2625	Mobile	46
451.275	Base or mobile	28

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PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
451.28125 .....	.....do	28, 47
451.28750 .....	.....do	28, 41
451.29375 .....	.....do	28, 47
451.3625	Mobile	46
451.375	Base or mobile	28
451.38125 .....	.....do	28, 47
451.38750 .....	.....do	28, 41
451.39375 .....	.....do	28, 47
451.4125	Mobile	46
451.425	Base or mobile	28
451.43125 .....	.....do	28, 47
451.43750 .....	.....do	28, 41
451.44375 .....	.....do	28, 47
451.4625	Mobile	46
451.475	Base or mobile	28
451.48125 .....	.....do	28, 47
451.48750 .....	.....do	28, 41
451.49375 .....	.....do	28, 47
451.5125	Mobile	46
451.525	Base or mobile	28
451.53125 .....	.....do	28, 47
451.53750 .....	.....do	28, 41
451.54375 .....	.....do	28, 47
451.550 .....	.....do	4, 5, 10
451.55625 .....	.....do	4, 5, 10, 47
451.56250 .....	.....do	4, 5, 10, 41
451.56875 .....	.....do	4, 5, 10, 47
451.575 .....	.....do	28
451.58125 .....	.....do	28, 47
451.58750 .....	.....do	28, 41
451.59375 .....	.....do	28, 47
451.600 .....	.....do	4, 5, 10
451.60625 .....	.....do	4, 5, 10, 47
451.61250 .....	.....do	4, 5, 10, 41
451.61875 .....	.....do	4, 5, 10, 47
451.625 .....	.....do	28
451.63125 .....	.....do	28, 47
451.63750 .....	.....do	28, 41
451.64375 .....	.....do	28, 47
451.650 .....	.....do	4, 5, 10
451.65625 .....	.....do	4, 5, 10, 47
451.66250 .....	.....do	4, 5, 10, 41
451.66875 .....	.....do	4, 5, 10, 47
451.675 .....	.....do	28
451.68125 .....	.....do	28, 47
451.68750 .....	.....do	28, 41
451.69375 .....	.....do	28, 47
451.700 .....	.....do	4, 5, 10
451.70625 .....	.....do	4, 5, 10, 47
451.71250 .....	.....do	4, 5, 10, 41
451.71875 .....	.....do	4, 5, 10, 47
451.7375	Mobile	46
451.750	Base or mobile	4, 5, 10
451.75625 .....	.....do	4, 5, 10, 47
451.76250 .....	.....do	4, 5, 10, 41
451.76875 .....	.....do	4, 5, 10, 47

PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
454.000 .....	.....do	6
456.1625	Mobile	46
456.175 .....	.....do	28
456.18125 .....	.....do	28, 47
456.18750 .....	.....do	28, 41
456.19375 .....	.....do	28, 47
456.2125 .....	.....do	46
456.225 .....	.....do	28
456.23125 .....	.....do	28, 47
456.23750 .....	.....do	28, 41
456.24375 .....	.....do	28, 47
456.2625 .....	.....do	46
456.275 .....	.....do	28
456.28125 .....	.....do	28, 47
456.28750 .....	.....do	28, 41
456.29375 .....	.....do	28, 47
456.3625 .....	.....do	46
456.375 .....	.....do	28
456.38125 .....	.....do	28, 47
456.38750 .....	.....do	28, 41
456.39375 .....	.....do	28, 47
456.4125 .....	.....do	46
456.425 .....	.....do	28
456.43125 .....	.....do	28, 47
456.43750 .....	.....do	28, 41
456.44375 .....	.....do	28, 47
456.4625 .....	.....do	46
456.475 .....	.....do	28
456.48125 .....	.....do	28, 47
456.48750 .....	.....do	28, 41
456.49375 .....	.....do	28, 47
456.5125 .....	.....do	46
456.525 .....	.....do	28
456.53125 .....	.....do	28, 47
456.53750 .....	.....do	28, 41
456.54375 .....	.....do	28, 47
456.550 .....	.....do	10
456.55625 .....	.....do	10, 47
456.56250 .....	.....do	10, 41
456.56875 .....	.....do	10, 47
456.575 .....	.....do	28
456.58125 .....	.....do	28, 47
456.58750 .....	.....do	28, 41
456.59375 .....	.....do	28, 47
456.600 .....	.....do	10
456.60625 .....	.....do	10, 47
456.61250 .....	.....do	10, 41
456.61875 .....	.....do	10, 47
456.625 .....	.....do	28
456.63125 .....	.....do	28, 47
456.63750 .....	.....do	28, 41
456.64375 .....	.....do	28, 47
456.650 .....	.....do	10
456.65625 .....	.....do	10, 47
456.66250 .....	.....do	10, 41
456.66875 .....	.....do	10, 47
456.675 .....	.....do	28
456.68125 .....	.....do	28, 47
456.68750 .....	.....do	28, 41
456.69375 .....	.....do	28, 47
456.700 .....	.....do	10
456.70625 .....	.....do	10, 47
456.71250 .....	.....do	10, 41
456.71875 .....	.....do	10, 47
456.7375 .....	.....do	46
456.750 .....	.....do	10
456.75625 .....	.....do	10, 47
456.76250 .....	.....do	10, 41
456.76875 .....	.....do	10, 47
459.000	Base or mobile	6

PETROLEUM RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
462.4625	Mobile	46
462.475	Base or mobile	28
462.48125 .....	.....do	28, 47
462.48750 .....	.....do	28, 41
462.49375 .....	.....do	28, 47
462.5125	Mobile	46
462.53125 .....	.....do	28, 47
467.4625	Mobile	46
467.475 .....	.....do	28, 41
467.48125 .....	.....do	28, 47
467.48750 .....	.....do	28
467.49375 .....	.....do	28, 47
467.5125 .....	.....do	46
467.525 .....	.....do	28, 41
467.53125 .....	.....do	28, 47
470 to 512	Base or mobile	29
806–821	Mobile only	30
851–866	Base or mobile	30
896 to 901	Mobile	30
928 and above	Operational fixed	31
929–930	Base only	42
935 to 940	Base or mobile	30
1427 to 1435	Operational fixed, base or mobile	26
2450 to 2500	Base or mobile	32
8400 to 8500 .....	.....do	33
10,550 to 10,680*	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) Only entities engaged in prospecting for petroleum, natural gas or petroleum products are eligible to use this spectrum, and then only in accordance with § 90.266. Except as provided in this part, licensees may not use these frequencies in the place of other operational circuits permitted by the Commission's Rules. Circuits operating on these frequencies may be used only for the following purposes:

(i) Providing standby backup communications for circuits which have been disrupted and which directly affect the safety of life, property, or the national interest; or,

(ii) Providing operational circuits during exploration.

(2) Use of this frequency is limited to an amplitude modulation mode of operation.

(3) This frequency is available for assignment only to stations utilized for geophysical purposes.

(4) Geophysical operations may use tone or impulse signaling for purposes

other than indicating failure of equipment or abnormal conditions on this frequency. All such tone or impulse signaling shall be on a secondary basis and subject to the following limitations:

(i) Maximum duration of a single nonvoice transmission, may not exceed 3 minutes.

(ii) The bandwidth utilized for secondary tone or impulse signaling shall not exceed that authorized to the licensee for voice emission on the frequency concerned.

(iii) Frequency loading resulting from the use of secondary tone or impulse signaling will not be considered in whole or in part, as a justification for authorizing additional frequencies in the licensee's mobile service system.

(iv) The maximum transmitter output power for tone or impulse transmissions shall not exceed 50 watts.

(5) This frequency is available for assignment to geophysical stations on a secondary basis to other petroleum licensees. Geophysical stations must cease operations on this frequency immediately upon receiving notice that interference is being caused to mobile service stations.

(6) This frequency is primarily available for oil spill containment and cleanup operations and for training and drills essential in the preparations for the containment and cleanup of oil spills. It is secondarily available for general base-mobile operations in the Petroleum Radio Service on a non-interference basis. Secondary users of this frequency are required to forego its use should oil spill containment and cleanup activities be present in their area of operation or upon notice by the Commission or a primary user that harmful interference is being caused to oil spill containment or cleanup activities in other areas.

(7) Operation on this frequency is secondary to stations in the maritime mobile service operating in accordance with the International table of frequency allocations.

(8) This frequency is shared with the Motor Carrier Radio Service.

(9) This Government frequency is available for shared Government/non-Government use by stations engaged in

oil spill containment and cleanup operations and for training and drills essential in the preparation for containment and cleanup of oil spills. Such use will be confined to inland and coastal waterways.

(10) This frequency is shared with the Forest Products Radio Service.

(11) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in § 90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of § 90.257. Seismic telemetry transmitters type accepted with 1 watt or less power and a frequency tolerance not exceeding $\pm 0.005\%$ may be used as temporary operational fixed stations.

(12) This frequency is shared with the Special Industrial Radio Service.

(13) This frequency is shared with the Forest Products and Manufacturers Radio Services.

(14) This frequency is shared with Power and Forest Products Radio Services and is available in this service only in the States of Arkansas, Louisiana, Oklahoma, and Texas. Elsewhere this frequency is available in the Power Radio Service.

(15) This frequency is available for assignment in this service only in the States of Arkansas, Louisiana, Oklahoma, and Texas. Elsewhere this frequency is available in the Power Radio Service.

(16) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 dB. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160° of azimuth.

(17) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(18) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 2.8 kHz and the maximum deviation may not exceed 2.5 kHz. For AM transmitters the highest modulating frequency may not exceed 2 kHz. The carrier frequency must be maintained within 0.0005 percent of the center of the frequency band, and the au-

thorized bandwidth may not exceed 6 kHz.

(19) This frequency is limited to a maximum power of 20 watts.

(20) This frequency is shared with Power and Forest Products Radio Services and is available in this service only in the States of Arkansas, Louisiana, Oklahoma, Oregon, Texas, and Washington. Elsewhere, this frequency is available only in the Power Radio Service.

(21) This frequency is available for assignment in this service only in the States of Arkansas, Louisiana, Oklahoma, Oregon, Texas, and Washington. Elsewhere, it is available in the Power Radio Service.

(22) This frequency is limited to a maximum output power of 75 watts.

(23) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of § 90.265.

(24) This frequency band is shared with Power, Forest Products, Special Industrial, Petroleum, Manufacturers, Business, and Local Government Radio Service's for remote control and telemetry operations.

(25) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 1.7 kHz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1.2 kHz. The carrier frequency must be maintained within 0.0005 percent, and the authorized bandwidth may not exceed 3 kHz.

(26) This band is available to stations operating in this service subject to the provisions of § 90.259.

(27) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(28) This frequency is available on a shared basis in the Power, Petroleum, Forest Products, Manufacturers, and Telephone Maintenance Radio Services. It may be assigned only when all of the frequencies in the 450–470 MHz band allocated to the service in which the applicant is primarily eligible are assigned within 56 km. (35 mi.) of the proposed base station.

(29) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(30) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(31) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(32) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(33) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(34) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations. The height of the antenna system may not exceed 15.24 meters (50 feet) above ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(35) The maximum output power of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobile stations. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(36) Use of this frequency is limited to stations located at least 120.7 km. (75 miles) from the center of an urbanized areas of 200,000 or more population (U.S. Census of Population, 1970). Operation is on a secondary basis to that in the Power Radio Service.

(37) This frequency is shared with the Special Industrial Radio Service and is available for assignment in the Petroleum Radio Service only in the States of Texas and Louisiana within 120 km (75 miles) of the Gulf of Mexico and in adjacent offshore waters. Mobile relay stations will not be authorized.

(38) This frequency is shared with the Special Industrial Radio Service in the

States of North Dakota; South Dakota; Iowa; Nebraska; Kansas and Missouri beyond 80 km (50 miles) from St. Louis and Kansas City; Colorado and Wyoming east of Longitude 106 degrees; and Minnesota south of Latitude 47 degrees.

(39) This frequency is shared with the Special Industrial Radio Service in the States of North Dakota; Iowa; Nebraska; Kansas; Missouri; Colorado and Wyoming east of Longitude 106 degrees; and Minnesota south of Latitude 47 degrees.

(40) This frequency may not be shared in the Special Industrial Radio Service within 32 km (20 miles) of the cities of Duluth, Minnesota; Des Moines and Davenport, Iowa; Omaha, Nebraska; Colorado Springs, Colorado; and Wichita, Kansas.

(41) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(42) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(43) This frequency is available on a shared basis with the Power, Business, Manufacturers, and Railroad Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries or confines of a plant, factory, or drilling platform primarily engaged in the production or refining of petroleum products (including natural gas). Operations on this frequency are subject to the provisions of §90.257(b). Pulsed modulations will not be authorized.

(44) This frequency is also used on a secondary basis by cordless telephones under part 15 of this chapter.

(45) Assignment of frequencies in this band are subject to the provisions of §90.173.

(46) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(47) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(48) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also § 90.253.)

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of § 90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(4) Persons eligible in this service who are engaged in the transportation of natural gas by pipeline and who have a substantial requirement for mobile service communication with a public utility company purchasing such gas for distribution to the consumer may be authorized to operate on the Power Radio Service frequency or frequencies assigned to such distributor(s). However, such operation shall be limited to communications in the local area common to both parties and shall relate only to gas supply and distribution activities. The application of any person seeking a frequency assignment under the provisions of this paragraph shall be accompanied by a written statement from the natural gas distributor which concurs in the need for such intercommunication, and consents to the use by the natural gas supplier of the frequencies involved.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation,

will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for developmental operation by applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Authorizations for multiple frequencies for geophysical operations will be granted on the frequencies governed by the limitations in paragraphs (c)(3) and (4) of this section notwithstanding this limitation. However, each geophysical exploration party may only use a maximum of four frequencies at any one time.

(4) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3))

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.65, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.67 Forest Products Radio Service.

(a) *Eligibility.* Persons primarily engaged in any of the following activities are eligible to hold authorizations in the Forest Products Radio Service to operate radio stations for transmission of communications essential to such activities of the licensee:

(1) Tree logging, tree farming, or related woods operations, including related hauling activities, if the hauling activities are performed under contract to, and exclusively for, persons engaged in woods operations;

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(2) Manufacturing lumber, plywood, hardboard, or pulp and paper products from wood fiber by persons eligible under the provisions of subparagraph (1) of this paragraph.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Forest Products Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
1676	Base or mobile	1
1700 .....	.....do	1
2398 .....	.....do	1
Megahertz:		
29.71 .....	.....do	
29.73 .....	.....do	
29.75 .....	.....do	
29.77 .....	.....do	
29.79 .....	.....do	
30.68 .....	.....do	
30.72 .....	.....do	
31.48 .....	.....do	30
31.52 .....	.....do	30
31.64 .....	.....do	30
31.72 .....	.....do	30
31.76 .....	.....do	30
37.44 .....	.....do	
37.88 .....	.....do	
43.02 .....	.....do	30
43.28 .....	.....do	30
43.36 .....	.....do	30
43.40 .....	.....do	30
43.52 .....	.....do	30
48.56 .....	.....do	2
48.58 .....	.....do	2
48.60 .....	.....do	2
48.62 .....	.....do	2
48.64 .....	.....do	2
48.66 .....	.....do	2
48.68 .....	.....do	2
48.70 .....	.....do	2
48.72 .....	.....do	2
48.74 .....	.....do	2
48.76 .....	.....do	2, 38
48.78 .....	.....do	2
48.80 .....	.....do	2
48.82 .....	.....do	2
48.84 .....	.....do	2, 38
48.86 .....	.....do	2, 38
48.88 .....	.....do	2
48.90 .....	.....do	2
48.92 .....	.....do	2, 38
48.94 .....	.....do	2
48.96 .....	.....do	2
48.98 .....	.....do	2
49.00 .....	.....do	2
49.02 .....	.....do	2, 38

FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
49.04 .....	.....do	2
49.06 .....	.....do	2
49.08 .....	.....do	2, 38
49.10 .....	.....do	2, 38
49.12 .....	.....do	2
49.14 .....	.....do	2
49.16 .....	.....do	2, 38
49.18 .....	.....do	2
49.20 .....	.....do	2, 38
49.22 .....	.....do	2
49.24 .....	.....do	2, 38
49.26 .....	.....do	2
49.28 .....	.....do	2, 38
49.30 .....	.....do	2
49.32 .....	.....do	2
49.34 .....	.....do	2
49.36 .....	.....do	2, 38
49.38 .....	.....do	2
49.40 .....	.....do	2, 38
49.42 .....	.....do	2
49.44 .....	.....do	2
49.46 .....	.....do	2, 38
49.48 .....	.....do	2
49.50 .....	.....do	2, 38
49.54 .....	.....do	3
49.58 .....	.....do	3
72.00 to 76.00	Operational fixed	4
72.44	Mobile	34
72.48 .....	.....do	34
72.52 .....	.....do	34
72.56 .....	.....do	34
72.60 .....	.....do	34
75.44 .....	.....do	34
75.48 .....	.....do	34
75.52 .....	.....do	34
75.56 .....	.....do	34
75.60 .....	.....do	34
150 to 170	Base or mobile	39, 43
152.465 .....	.....do	29
152.480 .....	.....do	5, 40
153.050 .....	.....do	6, 31, 33
153.0575 .....	.....do	6, 31, 33,
		36
153.065 .....	.....do	6
153.0725 .....	.....do	6, 36
153.080 .....	.....do	6
153.0875 .....	.....do	6, 36
153.095 .....	.....do	6
153.1025 .....	.....do	6, 36
153.110 .....	.....do	6
153.1175 .....	.....do	6, 36
153.125 .....	.....do	6, 31, 33
153.1325 .....	.....do	6, 31, 33,
		36
153.140 .....	.....do	6
153.1475 .....	.....do	6, 36
153.155 .....	.....do	6
153.1625 .....	.....do	6, 36
153.170 .....	.....do	6
153.1775 .....	.....do	6, 36
153.185 .....	.....do	6
153.1925 .....	.....do	6, 36
153.200 .....	.....do	6
153.2075 .....	.....do	6, 36
153.215do	6
153.2225do	6, 36
153.230do	6
153.2375do	6, 36
153.245do	6
153.2525do	6, 36

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FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
153.260 .....	.....do	6
153.2675 .....	.....do	6, 36
153.275 .....	.....do	6
153.2825 .....	.....do	6, 36
153.290 .....	.....do	6
153.2975 .....	.....do	6, 36
153.305 .....	.....do	6
153.3125 .....	.....do	6, 36
153.320 .....	.....do	6
153.3275 .....	.....do	6, 36
153.335 .....	.....do	6, 31
153.3425 .....	.....do	6, 31, 36
153.350 .....	.....do	6, 31
153.3575 .....	.....do	6, 31, 36
153.365 .....	.....do	6, 31
153.3725 .....	.....do	6, 31, 36
153.380 .....	.....do	6, 31
153.3875 .....	.....do	6, 31, 36
153.395 .....	.....do	6, 31
153.4025 .....	.....do	6, 31, 36
153.425 .....	.....do	7
153.4325 .....	.....do	7, 36
153.440 .....	.....do	2, 8
153.4475 .....	.....do	2, 8, 36
153.455 .....	.....do	7
153.4625 .....	.....do	7, 36
153.485 .....	.....do	7
153.4925 .....	.....do	7, 36
153.500 .....	.....do	2, 8
153.5075 .....	.....do	2, 8, 36
153.515 .....	.....do	7
153.5225 .....	.....do	7, 36
153.545 .....	.....do	7
153.5525 .....	.....do	7, 36
153.560 .....	.....do	2, 8
153.5675 .....	.....do	2, 8, 36
153.575 .....	.....do	7
153.5825 .....	.....do	7, 36
153.605 .....	.....do	7
153.6125 .....	.....do	7, 36
153.620 .....	.....do	2, 8
153.6275 .....	.....do	2, 8, 36
153.635 .....	.....do	7
153.6425 .....	.....do	7, 36
153.665 .....	.....do	7
153.6725 .....	.....do	7, 36
153.680 .....	.....do	2, 8
153.6875 .....	.....do	2, 8, 36
154.45625	Fixed or mobile	13, 14, 25, 27
154.46375 .....	.....do	13, 14, 24, 25, 26
154.47125 .....	.....do	13, 14, 24, 25
154.47875 .....	.....do	13, 14, 25, 27
154.570	Mobile	9
154.600 .....	.....do	9
154.625	Base or mobile	5, 40
154.640 .....	.....do	5, 36
157.725 .....	.....do	29
157.740 .....	.....do	5, 40
158.145 .....	.....do	10
158.1525 .....	.....do	10, 36
158.160 .....	.....do	2, 11
158.1675 .....	.....do	2, 11, 36
158.175 .....	.....do	10
158.1825 .....	.....do	10, 36
158.205 .....	.....do	10

FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
158.2125 .....	.....do	10, 36
158.220 .....	.....do	2, 11
158.2275 .....	.....do	2, 11, 36
158.235 .....	.....do	10
158.2425 .....	.....do	10, 36
158.265 .....	.....do	10
158.2725 .....	.....do	10, 36
158.280 .....	.....do	6
158.2875 .....	.....do	6, 36
158.295 .....	.....do	6
158.3025 .....	.....do	6, 36
158.310 .....	.....do	6
158.3175 .....	.....do	6, 36
158.325 .....	.....do	6, 31, 33
158.3325 .....	.....do	6, 31, 33, 36
158.355 .....	.....do	2, 32
158.3625 .....	.....do	2, 32, 36
158.370 .....	.....do	2
158.3775 .....	.....do	2, 36
158.415 .....	.....do	6, 31, 33
158.4225 .....	.....do	6, 31, 33, 36
158.430 .....	.....do	6
158.4375 .....	.....do	6, 36
158.460 .....	.....do	5, 40
169–172	Mobile, operational fixed.	12
173.20375	Fixed or mobile	13, 14, 24, 25
173.2100 .....	.....do	13, 15, 24, 25
173.2375 .....	.....do	13, 14, 25, 27
173.250	Base or mobile	2, 11
173.2625	Fixed or mobile	13, 14, 25, 27
173.2875 .....	.....do	13, 14, 25, 27
173.300	Base or mobile	2, 11
173.3125	Fixed or mobile	13, 14, 25, 27
173.3375 .....	.....do	13, 14, 25, 27
173.350	Base or mobile	2, 11
173.3625	Fixed or mobile	13, 14, 25, 27
173.3900 .....	.....do	13, 15, 24, 25
173.39625 .....	.....do	13, 14, 24, 25
216–220	Base or mobile	16
220–222	Base and mobile	37
406–413	Operational fixed	12
450–470	Fixed, base, or mobile	17, 39
451.1625	Mobile	41
451.175	Base or mobile	18
451.18125 .....	.....do	18, 42
451.18750 .....	.....do	18, 36
451.19375 .....	.....do	18, 42
451.2125	Mobile	41
451.225	Base or mobile	18
451.23125 .....	.....do	18, 42
451.23750 .....	.....do	18, 36
451.24375 .....	.....do	18, 42
451.2625	Mobile	41
451.275	Base or mobile	18
451.28125 .....	.....do	18, 42
451.28750 .....	.....do	18, 36
451.29375 .....	.....do	18, 42

FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
451.3625	Mobile	41
451.375	Base or mobile	18
451.38125 .....	.....do	18, 42
451.38750 .....	.....do	18, 36
451.39375 .....	.....do	18, 42
451.4125	Mobile	41
451.425	Base or mobile	18
451.43125 .....	.....do	18, 42
451.43750 .....	.....do	18, 36
451.44375 .....	.....do	18, 42
451.4625	Mobile	41
451.475	Base or mobile	18
451.48125 .....	.....do	18, 42
451.48750 .....	.....do	18, 36
451.49375 .....	.....do	18, 42
451.5125	Mobile	41
451.525	Base or mobile	18
451.53125 .....	.....do	18, 42
451.53750 .....	.....do	18, 36
451.54375 .....	.....do	18, 42
451.550 .....	.....do	2
451.55625 .....	.....do	2, 42
451.56250 .....	.....do	2, 36
451.56875 .....	.....do	2, 42
451.575 .....	.....do	18
451.58125 .....	.....do	18, 42
451.58750 .....	.....do	18, 36
451.59375 .....	.....do	18, 42
451.600 .....	.....do	2
451.60625 .....	.....do	2, 42
451.61250 .....	.....do	2, 36
451.61875 .....	.....do	2, 42
451.625 .....	.....do	18
451.63125 .....	.....do	18, 42
451.63750 .....	.....do	18, 36
451.64375 .....	.....do	18, 42
451.650 .....	.....do	2
451.65625 .....	.....do	2, 42
451.66250 .....	.....do	2, 36
451.66875 .....	.....do	2, 42
451.675 .....	.....do	18
451.68125 .....	.....do	18, 42
451.68750 .....	.....do	18, 36
451.69375 .....	.....do	18, 42
451.700 .....	.....do	2
451.70625 .....	.....do	2, 42
451.71250 .....	.....do	2, 36
451.71875 .....	.....do	2, 42
451.7375	Mobile	41
451.750	Base or mobile	2
451.75625 .....	.....do	2, 42
451.76250 .....	.....do	2, 36
451.76875 .....	.....do	2, 42
452.100 .....	.....do	28
452.10625 .....	.....do	28, 42
452.11250 .....	.....do	28, 36
452.11875 .....	.....do	28, 42
452.200 .....	.....do	28
452.20625 .....	.....do	28, 42
452.21250 .....	.....do	28, 36
452.21875 .....	.....do	28, 42
452.225 .....	.....do	28
452.23125 .....	.....do	28, 42
452.23750 .....	.....do	28, 36
452.24375 .....	.....do	28, 42
452.250 .....	.....do	28
452.25625 .....	.....do	28, 42
452.26250 .....	.....do	28, 36
452.26875 .....	.....do	28, 42
452.275 .....	.....do	28

FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
452.28125 .....	.....do	28, 42
452.28750 .....	.....do	28, 36
452.29375 .....	.....do	28, 42
452.350 .....	.....do	28
452.35625 .....	.....do	28, 42
452.36250 .....	.....do	28, 36
452.36875 .....	.....do	28, 42
452.400 .....	.....do	28
452.40625 .....	.....do	28, 42
452.41250 .....	.....do	28, 36
452.41875 .....	.....do	28, 42
452.450 .....	.....do	28
452.45625 .....	.....do	28, 42
452.46250 .....	.....do	28, 36
452.46875 .....	.....do	28, 42
456.1625	Mobile	41
456.175 .....	.....do	18
456.18125 .....	.....do	18, 42
456.18750 .....	.....do	18, 36
456.19375 .....	.....do	18, 42
456.2125 .....	.....do	41
456.225 .....	.....do	18
456.23125 .....	.....do	18, 42
456.23750 .....	.....do	18, 36
456.24375 .....	.....do	18, 42
456.2625 .....	.....do	41
456.275 .....	.....do	18
456.28125 .....	.....do	18, 42
456.28750 .....	.....do	18, 36
456.29375 .....	.....do	18, 42
456.3625 .....	.....do	41
456.375 .....	.....do	18
456.38125 .....	.....do	18, 42
456.38750 .....	.....do	18, 36
456.39375 .....	.....do	18, 42
456.4125 .....	.....do	41
456.425 .....	.....do	18
456.43125 .....	.....do	18, 42
456.43750 .....	.....do	18, 36
456.44375 .....	.....do	18, 42
456.4625 .....	.....do	41
456.475 .....	.....do	18
456.48125 .....	.....do	18, 42
456.48750 .....	.....do	18, 36
456.49375 .....	.....do	18, 42
456.5125 .....	.....do	41
456.525 .....	.....do	18
456.53125 .....	.....do	18, 42
456.53750 .....	.....do	18, 36
456.54375 .....	.....do	18, 42
456.550 .....	.....do	2
456.55625 .....	.....do	2, 42
456.56250 .....	.....do	2, 36
456.56875 .....	.....do	2, 42
456.575 .....	.....do	18
456.58125 .....	.....do	18, 42
456.58750 .....	.....do	18, 36
456.59375 .....	.....do	18, 42
456.600 .....	.....do	2
456.60625 .....	.....do	2, 42
456.61250 .....	.....do	2, 36
456.61875 .....	.....do	2, 42
456.625 .....	.....do	18
456.63125 .....	.....do	18, 42
456.63750 .....	.....do	18, 36
456.64375do	18, 42
456.650do	2
456.65625do	2, 42
456.66250do	2, 36
456.66875do	2, 42

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FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
456.675 .....	.....do	18
456.68125 .....	.....do	18, 42
456.68750 .....	.....do	18, 36
456.69375 .....	.....do	18, 42
456.700 .....	.....do	2
456.70625 .....	.....do	2, 42
456.71250 .....	.....do	2, 36
456.71875 .....	.....do	2, 42
456.7375 .....	.....do	41
456.750 .....	.....do	2
456.75625 .....	.....do	2, 42
456.76250 .....	.....do	2, 36
456.76875 .....	.....do	2, 42
457.100 .....	.....do	28
457.10625 .....	.....do	28, 42
457.11250 .....	.....do	28, 36
457.11875 .....	.....do	28, 42
457.200 .....	.....do	28
457.20625 .....	.....do	28, 42
457.21250 .....	.....do	28, 36
457.21875 .....	.....do	28, 42
457.225 .....	.....do	28
457.23125 .....	.....do	28, 42
457.23750 .....	.....do	28, 36
457.24375 .....	.....do	28, 42
457.250 .....	.....do	28
457.25625 .....	.....do	28, 42
457.26250 .....	.....do	28, 36
457.26875 .....	.....do	28, 42
457.275 .....	.....do	28
457.28125 .....	.....do	28, 42
457.28750 .....	.....do	28, 36
457.29375 .....	.....do	28, 42
457.350 .....	.....do	28
457.35625 .....	.....do	28, 42
457.36250 .....	.....do	28, 36
457.36875 .....	.....do	28, 42
457.400 .....	.....do	28
457.40625 .....	.....do	28, 42
457.41250 .....	.....do	28, 36
457.41875 .....	.....do	28, 42
457.450 .....	.....do	28
457.45625 .....	.....do	28, 42
457.46250 .....	.....do	28, 36
457.46875 .....	.....do	28, 42
462.4625 .....	.....do	41
462.475	Base or mobile	18
462.48125 .....	.....do	18, 42
462.48750 .....	.....do	18, 36
462.49375 .....	.....do	18, 42
462.5125 .....	.....do	41
462.525	Base or mobile	18
462.53125 .....	.....do	18, 42
467.4625	Mobile	41
467.475 .....	.....do	18
467.48125 .....	.....do	18, 42
467.48750 .....	.....do	18, 36
467.49375 .....	.....do	18, 42
467.5125 .....	.....do	41
467.525 .....	.....do	18
467.53125 .....	.....do	18, 42
470–512	Base or mobile	19
806–821	Mobile only	20
851–866	Base or mobile	20
896–901	Mobile	20
928 and above	Operational fixed	21
929–930	Base only	35
935–940	Base or mobile	20
1427–1435	Operational fixed, base or mobile.	16

FOREST PRODUCTS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
2450–2500	Base or mobile	22
8400–8500 .....	.....do	23
10,550–10,680* .....	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency tabulation of paragraph (b) of this section:

(1) Frequencies below 25 MHz will be assigned to base or mobile stations in this service only upon a satisfactory showing that, from a safety of life standpoint, frequencies above 25 MHz will not meet the operational requirements of the applicant.

(2) This frequency is shared with the Petroleum Radio Service.

(3) This frequency is shared with the Special Industrial Radio Service.

(4) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(5) This frequency is available in this service and in the Special Industrial Radio Service on a secondary basis to one-way paging communications authorized in the Business Radio Service.

(6) This frequency is shared with the Petroleum and Manufacturers Radio Services.

(7) This frequency is shared with the Power and Petroleum Radio Service and is available in this service only in the States of Arkansas, Louisiana, Oklahoma, and Texas. Elsewhere it is available in the Power Radio Service.

(8) This frequency is available for assignment in this service, only in the States of Arkansas, Louisiana, Oklahoma, and Texas. Elsewhere, this frequency is available in the Power Radio Service.

(9) Authorizations to operate on this frequency will be issued for A2B, A2D, F2B or F2D emission for tone signaling or for a combination of such emission with A3E, F3E or G3E emission with a maximum bandwidth of 20 kHz. The

output power shall not exceed 2 watts. The maximum distance between any transmitter and the center of the radiating portion of its antenna shall not exceed 8 m. (25 ft.) Operation on this frequency is secondary to stations in the Business Radio Service.

(10) This frequency is shared with Power and Petroleum Radio Services and is available in this service only in the States of Arkansas, Louisiana, Oklahoma, Oregon, Texas, and Washington.

(11) This frequency is available for assignment in this service, only in the States of Arkansas, Louisiana, Oklahoma, Oregon, Texas, and Washington. Elsewhere it is available in the Power Radio Service.

(12) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of § 90.265.

(13) This frequency is available on a shared basis with the Local Government, Power, Petroleum, Special Industrial, Business, and Manufacturers Radio Services for remote control and telemetry operations.

(14) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 2.8 kHz and the maximum deviation may not exceed 2.5 kHz. For AM transmitters the highest modulating frequency may not exceed 2 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 6 kHz.

(15) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 1.7 kHz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1.2 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 3 kHz.

(16) This band is available to stations in this service subject to the provisions of § 90.259.

(17) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(18) This frequency is available on a shared basis in the Power, Petroleum, Forest Products, Manufacturers, and Telephone Maintenance Radio Services. It may be assigned only when all of the frequencies in the 450–470 MHz band allocated to the service in which the applicant is primarily eligible are assigned within the 56 km. (35 mi) of the proposed base station.

(19) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(20) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(21) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(22) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(23) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(24) The maximum output power of the transmitter may not exceed 50 watts for fixed stations and 3 watts for mobile stations. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(25) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 db. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160° of azimuth.

(26) Use of this frequency is limited to stations located at least 120.7 km (75 miles) from the center of any urbanized area of 200,000 or more population (U.S. Census of Population, 1970). Operation is on a secondary basis to that in the Power Radio Service.

(27) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations. The height of the antenna system may not exceed 15.24 meters (50 feet) above ground. All such operation is on a secondary basis to adjacent land mobile operations.

(28) This frequency is shared with the Taxicab Radio Service. It is available for assignment in this service only in the States of Washington, Oregon, Idaho, and Montana in areas at least 64 km (40 miles) from the center of urbanized areas of 200,000 or more population (U.S. Census of Population, 1970). The maximum output power is limited to 75 watts.

(29) This frequency is shared with the Taxicab and Special Industrial Radio Services. Use of this frequency is limited to stations located at least 80.5 km (50 miles) from the center of any urbanized area of 600,000 or more population (U.S. Census of Population, 1970). All operations on this frequency are limited to a maximum transmitter output power of 75 watts.

(30) This frequency is shared with the Special Industrial Radio Service, and is available for assignment in the Forest Products Radio Service only in the States of Washington; Oregon; Idaho; Nevada, and Montana west of Longitude 110 degrees; and California north at Latitude 39 degrees. Evidence of interservice frequency coordination is required, and mobile relay stations will not be authorized.

(31) This frequency is shared with the Special Industrial Radio Service in the States of North Dakota; South Dakota; Iowa; Nebraska; Kansas and Missouri beyond 80 km (50 miles) from St. Louis and Kansas City; Colorado and Wyoming east of Longitude 106 degrees; and Minnesota south of Latitude 47 degrees.

(32) This frequency is shared with the Special Industrial Radio Service in the States of North Dakota; South Dakota; Iowa; Nebraska; Kansas; Missouri; Colorado and Wyoming east of Longitude 106 degrees; and Minnesota south of Latitude 47 degrees.

(33) This frequency may not be shared in the Special Industrial Radio Service within 32 km (20 miles) of the cities of Duluth, Minnesota; Des

Moines and Davenport, Iowa; Omaha, Nebraska; Colorado Springs, Colorado; and Wichita, Kansas.

(34) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, and Fire Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries of a logging site or confines of a plant, factory, lumber or paper mill. All operations on this frequency are subject to the provisions of § 90.257(b).

(35) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(36) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(37) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(38) This frequency is also used on a secondary basis by cordless telephones under part 15 of this chapter.

(39) Assignment of frequencies in this band are subject to the provisions of § 90.173.

(40) This frequency will be authorized a channel bandwidth of 25 kHz.

(41) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(42) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(43) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service (See also § 90.253.)

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of § 90.253.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(4) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency or pair of frequencies in the pair frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with Operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for developmental operation by applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.67, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.69 Film and Video Production Radio Service.

(a) Eligibility. The following are eligible to hold authorizations in the

Film and Video Production Radio Service to operate radio stations for transmission of communications essential to such activities of the licensee.

(1) Persons primarily engaged in the production, videotaping or filming of motion pictures or television programs, such as movies, programs, news programs, special events, educational programs or training films, regardless of whether the productions are prepared primarily for final exhibition at theatrical outlets or on television or for distribution through other mass communications outlets. Television or cable entities that are eligible to be licensed under part 74 or 78 of the Rules are not eligible to use the Film and Video Production Radio Service:

(i) To transmit programming (see § 90.415),

(ii) To coordinate the live transmission of an event, or

(iii) To coordinate the taping of an event, where the taped material is to be transmitted to the public within 48 hours.

(2) Persons providing direct technical support to eligibles identified in paragraph (a)(1) of this section.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Film and Video Production Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

FILM AND VIDEO PRODUCTION RADIO SERVICE
FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
1628	Base or mobile	1
1652 .....	.....do	1
2292 .....	.....do	1
2398 .....	.....do	1
4637.5 .....	.....do	1
Megahertz		
72 to 76	Operational fixed	2
150 to 170	Base or mobile	15, 16
152.8625 .....	.....do	3, 14
152.87 .....	.....do	3
152.8775 .....	.....do	3, 12
152.90 .....	.....do	3
152.9075 .....	.....do	3, 12
152.93 .....	.....do	3
152.9375 .....	.....do	3, 12

FILM AND VIDEO PRODUCTION RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
152.96 .....	.....do	3
152.9675 .....	.....do	3, 12
152.99 .....	.....do	3
152.9975 .....	.....do	3, 12
153.02 .....	.....do	3
153.0275 .....	.....do	3, 12
169–172	Mobile	11
173.225	Base or mobile	4
173.275 .....	.....do	4
173.325 .....	.....do	4
173.375 .....	.....do	4
220–222	Base and mobile	13
806 to 821	Mobile	5
851 to 866	Base or mobile	5
896 to 901	Mobile	5
928 and above	Operational fixed	6
929–930	Base only	10
935 to 940	Base or mobile	5
1427 to 1435	Base, mobile or operational fixed.	7
2450 to 2500	Base or mobile	8
8400 to 8500 .....	.....do	9
10,550 to 10,680* .....	.....do	

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) Frequencies below 25 MHz will be assigned to base or mobile stations in this service only upon a satisfactory showing that, from a safety of life standpoint, frequencies above 25 MHz will not meet the operational requirements of the applicant.

(2) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(3) This frequency is shared with the Special Industrial Radio Service.

(4) This frequency is shared with the Relay Press Radio Service.

(5) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(6) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(7) This band is available in this service subject to the provisions of §90.259.

(8) Available only on a shared basis with stations in other services, and subject to no protection from inter-

ference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(9) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(10) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(11) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(12) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(13) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(14) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(15) Assignment of frequencies in this band are subject to the provisions of §90.173

(16) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service.

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted.

(4) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247, notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for assignment for developmental operation by applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.69, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.71 Relay Press Radio Service.

(a) *Eligibility.* Persons primarily engaged in the publication of a newspaper or in the operation of an established press association are eligible to hold authorizations in the Relay Press Radio Service to operate radio stations for transmission of communications es-

sential to such activities of the licensee.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Relay Press Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (c) of this section:

RELAY PRESS RADIO SERVICE FREQUENCY
TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
72.0 to 76.0	Operational fixed	1
169–172	Mobile	8
173.225	Base or mobile	2
173.275 .....	.....do	2
173.325 .....	.....do	2
173.375 .....	.....do	2
220–222	Base and mobile	10
450–470	Fixed or mobile	11, 14
452.9625	Mobile	15
452.975	Fixed or mobile	
452.98125 .....	.....do	13
452.98750 .....	.....do	12
452.99375 .....	.....do	13
453.000 .....	.....do	
453.00625 .....	.....do	13
453.01250 .....	.....do	12
453.01875 .....	.....do	13
457.9625	Mobile	15
457.975 .....	.....do	
457.98125 .....	.....do	13
457.98750 .....	.....do	12
457.99375 .....	.....do	13
458.000 .....	.....do	
458.00625 .....	.....do	13
458.01250 .....	.....do	12
458.01875 .....	.....do	13
806 to 821 .....	.....do	3
851 to 866	Base or mobile	3
896 to 901	Mobile	3
929–930	Base only	9
928 and above	Operational fixed	4
935 to 940	Base or mobile	3
1427 to 1435	Operational fixed, base or mobile.	5
2450 to 2500	Base or mobile	6
8400 to 8500 .....	.....do	7
10,550 to 10,680* .....	.....do	

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) The frequencies available in the band 72–76 MHz are listed in § 90.257(a)(1). These frequencies are shared with other services and are

available only in accordance with the provisions of § 90.257.

(2) This frequency is shared with the Film and Video Production Radio Service.

(3) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(4) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(5) This band is available in this service subject to the provisions of § 90.259.

(6) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(7) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(8) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of § 90.265.

(9) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(10) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(11) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(12) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(13) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(14) Assignment of frequencies in this band are subject to the provisions of § 90.173.

(15) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section the following frequencies are available in this service. (See § 90.253.)

(1) [Reserved]

(2) Frequencies in the band 73–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(3) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normal only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single application in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for assignment to applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the

§ 90.73

Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.71, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.73 Special Industrial Radio Service.

(a) *Eligibility.* Persons regularly engaged in any of the following activities are eligible to hold authorizations in the Special Industrial Radio Service to operate radio stations for the transmission of only those communications essential to such activities of the licensee. (Persons engaging in some activities which are eligible under this paragraph and in some which are not, and desiring to use radio in connections with both types of activities should apply for authorization in the Business Radio Service.)

(1) The operation of farms, ranches, or similar land areas, for the quantity production of crops or plants; vines or trees (excluding forestry operations); or for the keeping, grazing or feeding of livestock for animal products, animal increase, or value enhancement. Persons establishing eligibility under this subparagraph may use their radio facilities in connection with the gathering or processing of products grown or raised for them by others.

(2) Plowing, soil conditioning, seeding, fertilizing, or harvesting for agricultural activities.

(3) Spraying or dusting of insecticides, herbicides, or fungicides, in areas other than enclosed structures.

(4) Livestock breeding service.

(5) The operation of a commercial business regularly engaged in the construction of roads, bridges, sewer systems, pipelines, airfields, or water, oil, gas, or power production, collection, or distribution systems. Other engineering projects, normally classified as heavy construction activities, will be considered on the merits of the showing made, however, the construction of buildings is not included in this category.

(6) The operation of mines for the recovery of solid fuels, minerals, metal, rock, sand and gravel from the earth or

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the sea, including the exploration for and development of mining properties.

(7) Maintaining, patrolling or repairing gas or liquid transmission pipelines, tank cars, water or waste disposal wells, industrial storage tanks, or distribution systems of public utilities. Persons establishing eligibility under this subparagraph may use their radio facilities in connection with the containment and cleanup of industrial liquid spillage.

(8) Acidizing, cementing, logging, perforating, or shooting activities, and services of a similar nature incident to the drilling of new oil or gas wells, or the maintenance of production from established wells.

(9) Supplying chemicals, mud, tools, pipe, and other materials or equipment unique to the petroleum and gas production industry, as the primary activity of the applicant if delivery, installation or application of these materials requires the use of specifically fitted conveyances.

(10) The delivery of ice or fuel to the consumer for heating, lighting, refrigeration or power generation purposes, by means other than pipelines or railroads when such products are not to be resold following their delivery. Persons establishing eligibility under this subparagraph may use their radio facilities in connection with the servicing of the equipment that uses or consumes the products delivered.

(11) The delivery and pouring of ready mixed concrete or hot asphalt mix.

(b) [Reserved]

(c) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Special Industrial Radio Service together with the class of station(s) to which they are normally assigned, and the specific assignment limitations which are explained in paragraph (d) of this section.

SPECIAL INDUSTRIAL RADIO SERVICE
FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
2,000 to 25,000	Fixed, base or mobile	1
2292	Base or mobile	1, 34
2398do	1, 34

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SPECIAL INDUSTRIAL RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
4637.5 .....	.....do	1, 34
Megahertz		
30.58 .....	.....do	2
30.60 .....	.....do	2
30.62 .....	.....do	2
30.64 .....	.....do	34
31.28 .....	.....do	34
31.32 .....	.....do	29, 34
31.36 .....	.....do	34
31.40 .....	.....do	29, 34
31.44 .....	.....do	29, 34
31.48 .....	.....do	29, 31, 34
31.52 .....	.....do	29, 31, 34
31.56 .....	.....do	34
31.60 .....	.....do	29, 34
31.64 .....	.....do	29, 31, 34
31.68 .....	.....do	34
31.72 .....	.....do	29, 31, 34
31.76 .....	.....do	29, 31, 34
31.80 .....	.....do	34
31.84 .....	.....do	34
31.88 .....	.....do	34
31.92 .....	.....do	34
31.96 .....	.....do	34
33.12 .....	.....do	3, 34
35.28	Base or mobile	34
35.32 .....	.....do	34
35.36 .....	.....do	34
35.40 .....	.....do	34
35.44 .....	.....do	34
35.48 .....	.....do	29, 34
35.52 .....	.....do	34
35.74 .....	.....do	2
35.76 .....	.....do	2
35.78 .....	.....do	2
35.80 .....	.....do	2
35.82 .....	.....do	2
35.84 .....	.....do	2
35.86 .....	.....do	2
43.02 .....	.....do	31, 34
43.04 .....	.....do	4
43.06 .....	.....do	34
43.08 .....	.....do	34
43.10 .....	.....do	34
43.12 .....	.....do	34
43.14 .....	.....do	34
43.18 .....	.....do	2
43.28 .....	.....do	31, 34
43.32 .....	.....do	34
43.36 .....	.....do	31, 34
43.40 .....	.....do	31, 34
43.44 .....	.....do	34
43.48 .....	.....do	34
43.52 .....	.....do	31, 34
47.44 .....	.....do	2
47.48 .....	.....do	2
47.52 .....	.....do	2
47.56 .....	.....do	32
47.60 .....	.....do	2
47.64 .....	.....do	2
47.68 .....	.....do	2
49.52 .....	.....do	34
49.54 .....	.....do	5, 34
49.56 .....	.....do	2
49.58 .....	.....do	5, 34
72–76	Operational fixed	6
72.44	Mobile	7
72.48 .....	.....do	7
72.52 .....	.....do	7

SPECIAL INDUSTRIAL RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
72.56 .....	.....do	7
72.60 .....	.....do	7
75.44 .....	.....do	7
75.48 .....	.....do	7
75.52 .....	.....do	7
75.56 .....	.....do	7
75.60 .....	.....do	7
150 to 170	Base or mobile	39, 42
151.490 .....	.....do	2, 8
151.4975 .....	.....do	2, 8, 35
151.505 .....	.....do	4
151.5125 .....	.....do	4, 35
151.520 .....	.....do	2
151.5275 .....	.....do	2, 35
151.535 .....	.....do	2
151.5425 .....	.....do	2, 35
151.550 .....	.....do	2
151.5575 .....	.....do	2, 35
151.565 .....	.....do	2
151.5725 .....	.....do	2, 35
151.580 .....	.....do	2
151.5875 .....	.....do	2, 35
151.595 .....	.....do	2
151.6025 .....	.....do	2, 35
152.465 .....	.....do	2, 28, 35
152.480 .....	.....do	2, 9, 35, 40
152.8625 .....	.....do	10, 34, 38
152.870 .....	.....do	10, 34
152.8775 .....	.....do	10, 34, 35
152.885 .....	.....do	2
152.8925 .....	.....do	2, 35
152.900 .....	.....do	2, 10
152.9075 .....	.....do	2, 10, 35
152.915 .....	.....do	2
152.9225 .....	.....do	2, 35
152.930 .....	.....do	2, 10
152.9375 .....	.....do	2, 10, 35
152.945 .....	.....do	2
152.9525 .....	.....do	2, 35
152.960 .....	.....do	2, 10
152.9675 .....	.....do	2, 10, 35
152.975 .....	.....do	2
152.9825 .....	.....do	2, 35
152.990 .....	.....do	2, 10
152.9975 .....	.....do	2, 10, 35
153.005 .....	.....do	2
153.0125 .....	.....do	2, 35
153.020 .....	.....do	2, 10
153.0275 .....	.....do	2, 10, 35
153.035 .....	.....do	2, 11
153.0425 .....	.....do	2, 11, 35
153.050 .....	.....do	2, 30, 33
153.0575 .....	.....do	2, 30, 33, 35
153.125 .....	.....do	2, 30, 33
153.1325 .....	.....do	2, 30, 33, 35
153.335 .....	.....do	2, 30
153.3425 .....	.....do	2, 30, 35
153.350 .....	.....do	2, 30
153.3575 .....	.....do	2, 30, 35
153.365 .....	.....do	2, 30
153.3725 .....	.....do	2, 30, 35
153.380 .....	.....do	2, 30
153.3875 .....	.....do	2, 30, 35
153.395 .....	.....do	2, 30
153.4025 .....	.....do	2, 30, 35
154.45625	Fixed or mobile	12, 13, 15, 25
154.46375 .....	.....do	12, 13, 15, 26, 27

SPECIAL INDUSTRIAL RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
154.47125 .....	.....do	12, 13, 15, 27
154.47875 .....	.....do	12, 13, 15, 25
154.4825	Base or mobile	2, 35
154.490 .....	.....do	2
154.4975 .....	.....do	2, 35
154.505 .....	.....do	2, 35
154.625 .....	.....do	2, 9, 40
154.640 .....	.....do	2, 9, 35
157.725 .....	.....do	2, 28
157.740 .....	.....do	2, 9, 40
158.325 .....	.....do	2, 30, 33
158.3325 .....	.....do	2, 30, 33, 35
158.355 .....	.....do	2, 32
158.3625 .....	.....do	2, 32, 35
158.385 .....	.....do	2
158.3925 .....	.....do	2, 35
158.400 .....	.....do	4
158.4075 .....	.....do	4, 35
158.415 .....	.....do	2, 30, 33
158.4225 .....	.....do	2, 30, 33, 35
158.460 .....	.....do	2, 9, 40
169 to 172	Mobile, operational fixed.	14
173.20375	Fixed or mobile	12, 13, 15, 27
173.2100 .....	.....do	12, 15, 16, 27
173.2375 .....	.....do	12, 13, 15, 25
173.2625 .....	.....do	12, 13, 15, 25
173.2875 .....	.....do	12, 13, 15, 25
173.3125 .....	.....do	12, 13, 15, 25
173.3375 .....	.....do	12, 13, 15, 25
173.3625 .....	.....do	12, 13, 15, 25
173.3900 .....	.....do	12, 15, 16, 27
173.39625 .....	.....do	12, 13, 15, 27
216 to 220	Base or mobile	17
220–222	Base and mobile	37
406–413	Operational fixed	14
450 to 470	Fixed, base, or mobile	18, 39
451.7125	Mobile	41
451.725	Base or mobile	2
451.73125 .....	.....do	2, 38
451.73750 .....	.....do	2, 35
451.74375 .....	.....do	2, 38
451.7625	Mobile	41
451.775	Base or mobile	2
451.78125 .....	.....do	2, 38
451.78750 .....	.....do	2, 35
451.79375 .....	.....do	2, 38
451.800	Operational fixed, base or mobile.	4, 19
451.80625 .....	.....do	4, 19, 38
451.81250 .....	.....do	4, 19, 35
451.81875 .....	.....do	4, 19, 38
451.825	Base or mobile	2
451.83125 .....	.....do	2, 38
451.83750 .....	.....do	2, 35
451.84375 .....	.....do	2, 38
451.850 .....	.....do	2

SPECIAL INDUSTRIAL RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
451.85625 .....	.....do	2, 38
451.86250 .....	.....do	2, 35
451.86875 .....	.....do	2, 38
451.875 .....	.....do	2
451.88125 .....	.....do	2, 38
451.88750 .....	.....do	2, 35
451.89375 .....	.....do	2, 38
451.900 .....	.....do	2
451.90625 .....	.....do	2, 38
451.91250 .....	.....do	2, 35
451.91875 .....	.....do	2, 38
451.925 .....	.....do	2
451.93125 .....	.....do	2, 38
451.93750 .....	.....do	2, 35
451.94375 .....	.....do	2, 38
451.950 .....	.....do	2
451.95625 .....	.....do	2, 38
451.96250 .....	.....do	2, 35
451.96875 .....	.....do	2, 38
451.975 .....	.....do	2
451.98125 .....	.....do	2, 38
451.98750 .....	.....do	2, 35
451.99375 .....	.....do	2, 38
452.000 .....	.....do	2
452.00625 .....	.....do	2, 38
452.01250 .....	.....do	2, 35
452.01875 .....	.....do	2, 38
452.025 .....	.....do	2
452.03125 .....	.....do	2, 38
452.03750 .....	.....do	2, 35
452.04375 .....	.....do	2, 38
452.0625	Mobile	41
452.075	Base or mobile	2
452.08125 .....	.....do	2, 38
452.08750 .....	.....do	2, 35
452.09375 .....	.....do	2, 38
452.1125	Mobile	41
452.125	Base or mobile	2
452.13125 .....	.....do	2, 38
452.13750 .....	.....do	2, 35
452.14375 .....	.....do	2, 38
452.1625	Mobile	41
452.175	Base or mobile	2
452.18125 .....	.....do	2, 38
452.18750 .....	.....do	2, 35
452.19375 .....	.....do	2, 38
456.7125	Mobile	41
456.725 .....	.....do	2
456.73125 .....	.....do	2, 38
456.73750 .....	.....do	2, 35
456.74375 .....	.....do	2, 38
456.7625 .....	.....do	41
456.775 .....	.....do	2
456.78125 .....	.....do	2, 38
456.78750 .....	.....do	2, 35
456.79375 .....	.....do	2, 38
456.800	Operational fixed, base or mobile.	4, 19
456.80625 .....	.....do	4, 19, 38
456.81250 .....	.....do	4, 19, 35
456.81875 .....	.....do	4, 19, 38
456.825	Mobile	2
456.83125 .....	.....do	2, 38
456.83750 .....	.....do	2, 35
456.84375 .....	.....do	2, 38
456.850 .....	.....do	2
456.85625 .....	.....do	2, 38
456.86250 .....	.....do	2, 35
456.86875 .....	.....do	2, 38
456.875 .....	.....do	2
456.88125 .....	.....do	2, 38

SPECIAL INDUSTRIAL RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
456.88750 .....	.....do	2, 35
456.89375 .....	.....do	2, 38
456.900 .....	.....do	2
456.90625 .....	.....do	2, 38
456.91250 .....	.....do	2, 35
456.91875 .....	.....do	2, 38
456.925 .....	.....do	2
456.93125 .....	.....do	2, 38
456.93750 .....	.....do	2, 35
456.94375 .....	.....do	2, 38
456.950 .....	.....do	2
456.95625 .....	.....do	2, 38
456.96250 .....	.....do	2, 35
456.96875 .....	.....do	2, 38
456.975 .....	.....do	2
456.98125 .....	.....do	2, 38
456.98750 .....	.....do	2, 35
456.99375 .....	.....do	2, 38
457.000 .....	.....do	2
457.00625 .....	.....do	2, 38
457.01250 .....	.....do	2, 35
457.01875 .....	.....do	2, 38
457.025 .....	.....do	2
457.03125 .....	.....do	2, 38
457.03750 .....	.....do	2, 35
457.04375 .....	.....do	2, 38
457.0625 .....	.....do	41
457.075 .....	.....do	2
457.08125 .....	.....do	2, 38
457.08750 .....	.....do	2, 35
457.09375 .....	.....do	2, 38
457.1125 .....	.....do	41
457.125 .....	.....do	2
457.13125 .....	.....do	2, 38
457.13750 .....	.....do	2, 35
457.14375 .....	.....do	2, 38
457.1625 .....	.....do	41
457.175 .....	.....do	2
457.18125 .....	.....do	2, 38
457.18750 .....	.....do	2, 35
457.19375 .....	.....do	2, 38
470 to 512	Base or mobile	20
806 to 821	Mobile	21
851 to 866	Base or mobile	21
896 to 901	Mobile	21
928 and above	Operational fixed	22
929–930	Base only	36
935 to 940	Base or mobile	21
1427 to 1435	Operational fixed, base or mobile.	17
2450 to 2500	Base or mobile	23
8400 to 8500 .....	.....do	24
10,550 to 10,680* .....	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(d) Explanation of assignment limitations appearing in the frequency table of paragraph (c) of this section:

(1) Only entities engaged in exploration, its support services, and the repair of pipelines are eligible to use this spectrum, and then only in accordance with § 90.266. Except as provided in this part, licensees may not use these fre-

quencies in the place of other operational circuits permitted by the Commission's Rules. The use of these frequencies is not subject to § 90.73(f). Circuits operating on these frequencies may be used only for the following purposes:

(i) Exploratory efforts in mining for solid fuels, minerals, and metals important to the national interest;

(ii) Repair of pipelines used for the transmission of fuel or water; and,

(iii) Services supporting the exploration for energy or mineral resources important to the national interest, without which such exploration cannot be conducted.

(2) This frequency will be assigned only for operation in a permanent area, normally within 120 km (75 mi.) of a specified reference point.

(3) Operation on this frequency is limited to a maximum output of 2 watts; and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may provide the operational functions of a base or fixed station, on a secondary basis to mobile service operations provided that the separation between the control point and the center of the radiating portion of the antenna of any units so used does not exceed 7.6 m (25 ft).

(4) This frequency will be assigned only to stations used in itinerant operations.

(5) This frequency is shared with the Forest Products Radio Service.

(6) The frequencies available in the band 72–76 MHz are listed in § 90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of § 90.257.

(7) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, and Fire Radio Services and interservice coordination is required. All communications must be conducted within the boundaries or confines of a plant, factory, shipyard, mill, mine, farm, ranch, or construction area. All operations on this frequency are subject to the provisions of § 90.257(b).

(8) This frequency is not available to stations in Puerto Rico or the Virgin Islands. Elsewhere, this frequency is

shared with the Forestry-Conservation Radio Service and interservice coordination is required.

(9) This frequency is available in this service and in the Forest Products Radio Service on a secondary basis to one-way paging communications authorized in the Business Radio Service.

(10) This frequency is shared with the Film and Video Production Radio Service.

(11) This frequency band is shared with the Petroleum Radio Service.

(12) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 dB. Omnidirectional antennas having unity gain may be employed for stations communicating with at least three receiving locations separated by 160° of azimuth.

(13) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 2.8 kHz and the maximum frequency deviation may not exceed 2.5 kHz. For AM transmitters, the highest modulating frequency may not exceed 2.0 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 6 kHz.

(14) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of § 90.265.

(15) This frequency band is shared with the Power, Forest Products, Special Industrial, Petroleum, Manufacturers, Business, and the Local Government Radio Services for remote control and telemetry operations.

(16) For FM transmitters the sum of the highest modulation frequency and the amount of frequency deviation may not exceed 1.7 kHz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1.2 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 3 kHz.

(17) This frequency band is available to stations in the service subject to the provisions of § 90.259.

(18) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(19) Operational fixed assignments on this frequency will only be made to an itinerant fixed control or relay station on a secondary basis to land-mobile stations in this service, provided that the fixed relay or control station is to be associated with base and mobile facilities authorized to use other frequencies available for itinerant operation in this service. All such use of these frequencies for fixed systems is limited to locations 161 or more km. (100 mi.) from the center of any urbanized area of 200,000 or more population, except that the distance may be 120 km. (75 mi.) if the output power does not exceed 20 watts. All such fixed systems are limited to a maximum of two frequencies and must employ directional antennas with a front-to-back ratio of at least 15 dB. The centers of urbanized areas of 200,000 or more population are determined from the appendix, page 226, of the U.S. Commerce publication, "Air Line Distance Between Cities in the United States." Urbanized areas of 200,000 or more population are defined in the U.S. Census of Population, 1960, volume 1, table 23, page 1–50.

(20) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(21) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(22) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(23) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new stations or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered, and their operation is co-primary with the Radiodetermination Satellite Service.

(24) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(25) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations. The height of the antenna system may not exceed 15.24 meters (50 feet) above ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(26) Use of this frequency is limited to stations located at least 120.7 km (75 miles) from the center of any urbanized area of 200,000 or more population (U.S. Census of Population, 1970). Operation is on a secondary basis to that in the Power Radio Service.

(27) The maximum output power of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobile stations. A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emission may be authorized.

(28) This frequency is shared with the Taxicab and Forest Products Radio Services. Use of this frequency is limited to stations located at least 80.5 km (50 miles) from the center of any urbanized area of 600,000 or more population (U.S. Census of Population, 1970). All operations on this frequency are limited to a transmitter output power of 75 watts.

(29) This frequency is shared with the Petroleum Radio Service in the States of Texas and Louisiana within 120 km (75 miles) of the Gulf of Mexico and in adjacent offshore waters.

(30) This frequency is shared with other Industrial Radio Services and is available for assignment in the Special Industrial Radio Service only in the States of North Dakota, South Dakota, Iowa, Nebraska, Kansas, and Missouri beyond 80 km (50 miles) from St. Louis and Kansas City; Wyoming and Colorado east of Longitude 106 degrees except within a 80 km (50 mile) radius of Denver; and Minnesota south of Latitude 47 degrees except within a 80 km (50 mile) radius of St. Paul, Minnesota. The maximum transmitter output power may not exceed 110 watts.

(31) This frequency is shared with the Forest Products Radio Service in the States of Washington; Oregon; Idaho; Nevada; Montana west of Longitude 110

degrees; and California north of Latitude 39 degrees.

(32) This frequency is shared with other Industrial Radio Services and is available for assignment in the Special Industrial Radio Service only in the States of North Dakota, South Dakota, Iowa, Nebraska, Kansas, Missouri, Colorado, and Wyoming east of Latitude 106 degrees; and Minnesota south of Latitude 47 degrees. The maximum transmitter output power may not exceed 110 watts.

(33) This frequency is not available for assignment in the Special Industrial Radio Service within 32 km (20 miles) of the cities of Duluth, Minnesota; Des Moines and Davenport, Iowa; Omaha, Nebraska; Colorado Springs, Colorado; and Wichita, Kansas.

(34) This frequency is for general use and may be assigned either for itinerant or permanent use operations.

(35) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(36) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(37) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(38) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(39) Assignment of frequencies in this band are subject to the provisions of §90.173.

(40) This frequency will be authorized a channel bandwidth of 25 kHz.

(41) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(42) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a

secondary, non-interference basis after August 1, 2003.

(e) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service: (See also §90.253)

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) The following frequencies are available only in Puerto Rico and the Virgin Islands. These “Base and Mobile” and “Mobile only” frequencies are available on a shared basis in the Forestry-Conservation and Railroad Radio Services respectively. These “Mobile only” frequencies may be assigned to a control station associated with a mobile relay system if it is also assigned to the associated mobile station.

Base and mobile	Mobile only
159.240	160.410
159.2475	160.4175
159.255	160.425
159.2625	160.4325
159.270	160.440
159.2775	160.4475
159.285	160.455
159.2925	160.4625
159.300	160.470
159.3075	160.4775
159.315	160.485
159.3225	160.4925
159.330	160.500
159.3375	160.5075
159.345	160.515
159.3525	160.5225
159.360	160.530
159.3675	160.5375
159.375	160.545
159.3825	160.5525
159.390	160.560
159.3975	160.5675
159.405	160.575
159.4125	160.5825
159.420	160.590
159.4275	160.5975
159.435	160.605
159.4425	160.6125

(5) Land mobile service frequencies above 152 MHz which are listed elsewhere in this part as available to the Petroleum, Forest Products, and Man-

ufacturers Radio Services, are also available, with the exception of the frequency 154.57 MHz, for assignment in this service for use in Hawaii, Puerto Rico, and the Virgin Islands, subject to the same limitations as apply in the Petroleum Forest Products, and Manufacturers Radio Services. Operation on such frequencies is secondary to stations operating in the Petroleum, Forest Products, or Manufacturers Radio Services and their use will be terminated if they are needed in the areas concerned in any of those services.

(6) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(f) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with §90.247, notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz and 37.00–37.01 MHz are available for assignment to applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Authorization for more than one mobile frequency in the band 72–76 MHz will be issued notwithstanding this limitation.

(4) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(5) This limitation shall not apply to paragraph (d)(1) of this section.

(g) *Limitation on itinerant operation.* Base or mobile stations being utilized in itinerant operation will be authorized only on base or mobile frequencies designated for itinerant operation under §90.73(d)(4).

Federal Communications Commission

§ 90.75

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.73, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§90.75 Business Radio Service.

(a) *Eligibility.* Persons primarily engaged in any of the following activities are eligible to hold authorizations in the Business Radio Service to provide commercial mobile radio service as defined in part 20 of this chapter or to operate stations for transmission of communications necessary to such activities of the licensee:

(1) The operation of a commercial activity.

(2) The operation of educational, philanthropic, or ecclesiastical institutions.

(3) Clergymen activities.

(4) The operation of hospitals, clinics or medical associations.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Business Radio Service together with the class of station(s) to which they are normally assigned, and the specific assignment limitations, which are explained in paragraph (c) of this section.

BUSINESS RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
27.43	Base or Mobile	1, 2
27.45 .....	.....do	1, 2
27.47 .....	.....do	1, 2
27.49 .....	.....do	1, 3
27.51	Mobile	4
27.53 .....	.....do	4
30.76	Base or Mobile	1, 2
30.80 .....	.....do	1, 2
30.84	Mobile	4, 22
30.88	Base or Mobile	1, 2
30.92 .....	.....do	1, 2
30.96 .....	.....do	1, 2
31.00 .....	.....do	1, 2
31.04 .....	.....do	1, 2
31.16 .....	.....do	1, 2
31.20 .....	.....do	1, 2
31.24 .....	.....do	1, 2
33.14	Mobile	4, 22
33.16	Base or Mobile	1, 2
33.40	Mobile	6, 22
35.02 .....	.....do	4, 5, 22
35.04	Base or Mobile	1, 3
35.06 .....	.....do	1, 2

BUSINESS RADIO SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
35.08 .....	.....do	1, 2
35.10 .....	.....do	1, 2
35.12 .....	.....do	1, 2
35.14 .....	.....do	1, 2
35.18 .....	.....do	1, 2
35.70 .....	.....do	2
35.72 .....	.....do	2
35.88 .....	.....do	1, 2
35.90 .....	.....do	1, 2
35.92 .....	.....do	1, 2
35.94 .....	.....do .....	.....
35.96 .....	.....do .....	.....
35.98 .....	.....do .....	.....
42.96 .....	.....do	1, 2
42.98	Mobile	4, 22
43.00	Base or Mobile	1, 2
72 to 76	Operational fixed	7
74.61	Mobile	45
74.63 .....	.....do	45
74.65 .....	.....do	45
74.67 .....	.....do	45
74.69 .....	.....do	45
74.71 .....	.....do	45
74.73 .....	.....do	45
74.75 .....	.....do	45
74.77 .....	.....do	45
74.79 .....	.....do	45
75.21 .....	.....do	45
75.23 .....	.....do	45
75.25 .....	.....do	45
75.27 .....	.....do	45
75.29 .....	.....do	45
75.31 .....	.....do	45
75.33 .....	.....do	45
75.35 .....	.....do	45
75.37 .....	.....do	45
75.39 .....	.....do	45
150 to 170	Base or Mobile	48, 54
150.815	Mobile	8
150.830	Base	8, 10, 12, 49, 55
150.845	Base or Mobile	8
150.8525 .....	.....do	8, 24
150.860 .....	.....do	8
150.8675 .....	.....do	8, 24
150.875 .....	.....do	8
150.8825 .....	.....do	8, 24
150.890 .....	.....do	8
150.8975 .....	.....do	8, 24
150.905 .....	.....do	8
150.920	Base	8, 10, 12, 49, 55
150.935	Base or Mobile	8
150.9425 .....	.....do	8, 24
150.950 .....	.....do	8
150.9575 .....	.....do	8, 24
150.965 .....	.....do	8
150.9725 .....	.....do	8, 24
150.995 .....	.....do	8
151.0025 .....	.....do	8, 24
151.010 .....	.....do	8
151.0175 .....	.....do	8, 24
151.025 .....	.....do	8
151.0325 .....	.....do	8, 24
151.040 .....	.....do	8
151.0475 .....	.....do	8, 24
151.055 .....	.....do	8
151.070	Base	8, 10, 12, 49, 55
151.085	Base or Mobile	8
151.0925 .....	.....do	8, 24

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
151.100 .....	.....do	8
151.1075 .....	.....do	8, 24
151.115 .....	.....do	8
151.1225 .....	.....do	8, 24
151.130 .....	.....do	8
151.1375 .....	.....do	8, 24
151.145 .....	.....do	8
151.1525 .....	.....do	8, 24
151.160 .....	.....do	8
151.1675 .....	.....do	8, 24
151.175 .....	.....do	8
151.190	Base	8, 10, 12, 49, 55
151.205	Base or Mobile	8
151.2125 .....	.....do	8, 24
151.220 .....	.....do	8
151.2275 .....	.....do	8, 24
151.235 .....	.....do	8
151.2425 .....	.....do	8, 24
151.250 .....	.....do	8
151.2575 .....	.....do	8, 24
151.265 .....	.....do	8
151.2725 .....	.....do	8, 24
151.280 .....	.....do	8
151.2875 .....	.....do	8, 24
151.295 .....	.....do	8
151.310	Base	8, 10, 12, 49, 55
151.325	Base or Mobile	8
151.3325 .....	.....do	8, 24
151.340 .....	.....do	8
151.3475 .....	.....do	8, 24
151.355 .....	.....do	8
151.3625 .....	.....do	8, 24
151.370 .....	.....do	8
151.3775 .....	.....do	8, 24
151.385 .....	.....do	8
151.3925 .....	.....do	8, 24
151.400 .....	.....do	8
151.4075 .....	.....do	8, 24
151.415 .....	.....do	8
151.4225 .....	.....do	8, 24
151.430 .....	.....do	8
151.4375 .....	.....do	8, 24
151.445 .....	.....do	8
151.4525 .....	.....do	8, 24
151.460 .....	.....do	8
151.4675 .....	.....do	8, 24
151.475 .....	.....do	8
151.4825 .....	.....do	8, 24
151.625 .....	.....do	1, 3
151.640 .....	.....do	1, 2, 46
151.6475 .....	.....do	1, 2, 24
151.655 .....	.....do	1, 2
151.6625 .....	.....do	1, 2, 24
151.670 .....	.....do	1, 2, 24
151.6775 .....	.....do	1, 2, 24
151.685 .....	.....do	1, 2
151.700 .....	.....do	3, 30, 47
151.715 .....	.....do	1, 2
151.7225 .....	.....do	1, 2, 24
151.730 .....	.....do	1, 2, 24
151.7375 .....	.....do	1, 2, 24
151.745 .....	.....do	1, 2
151.760 .....	.....do	3, 30, 47
151.775 .....	.....do	1, 2
151.7825 .....	.....do	1, 2, 24
151.790 .....	.....do	1, 2, 24
151.7975 .....	.....do	1, 2, 24
151.805 .....	.....do	1, 2
151.820	Mobile	13, 22, 47, 51

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
151.835	Base or Mobile	1, 2
151.8425 .....	.....do	1, 2, 24
151.850 .....	.....do	1, 2, 24
151.8575 .....	.....do	1, 2, 24
151.865 .....	.....do	1, 2
151.880	Mobile	13, 22, 47, 51
151.895	Base or Mobile	1, 2
151.9025 .....	.....do	1, 2, 24
151.910 .....	.....do	1, 2, 24
151.9175 .....	.....do	1, 2, 24
151.925 .....	.....do .....	.....
151.940	Mobile	13, 22, 47, 51
151.955	Base or Mobile .....	.....
151.9625 .....	.....do	1, 2, 24
151.970 .....	.....do	1, 2, 24
151.9775 .....	.....do	1, 2, 24
152.300 .....	.....do	9
152.3075 .....	.....do	9, 24
152.315 .....	.....do	1, 9
152.3225 .....	.....do	1, 9, 24
152.345 .....	.....do	1, 9
152.3525 .....	.....do	1, 9, 24
152.360 .....	.....do	9
152.3675 .....	.....do	9, 24
152.375 .....	.....do	1, 9
152.3825 .....	.....do	1, 9, 24
152.405 .....	.....do	1, 9
152.4125 .....	.....do	1, 9, 24
152.420 .....	.....do	9
152.4275 .....	.....do	9, 24
152.480	Base	10, 11, 12, 49, 55
154.45625	Mobile	18, 19, 36
154.46375 .....	.....do	18, 19, 35, 37
154.47125 .....	.....do	18, 19, 35
154.515	Base or Mobile	1, 2
154.5275	Mobile	3, 30, 47
154.540	Base or Mobile	1, 2
154.5475 .....	.....do	1, 2, 24
154.555 .....	.....do	1, 2, 46
154.570	Mobile	4, 13, 22
154.585 .....	.....do	4, 13, 22, 38, 24
154.600 .....	.....do	4, 14, 22
154.610	Base or Mobile	1, 2, 46
154.625	Base	10, 11, 15, 49
154.640 .....	.....do	10, 11, 15, 24
157.560	Base or Mobile	9
157.5675 .....	.....do	9, 24
157.575	Mobile	1, 9
157.5825 .....	.....do	1, 9, 24
157.605	Mobile	1, 9
157.6125 .....	.....do	1, 9, 24
157.620	Base or Mobile	9
157.6275 .....	.....do	9, 24
157.635	Mobile	1, 9
157.6425 .....	.....do	1, 9, 24
157.665	Mobile	1, 9
157.6725 .....	.....do	1, 9, 24
157.680 .....	.....do	9
157.6875 .....	.....do	9, 24
157.740	Base	10, 11, 12, 49, 55
158.460do	10, 11, 12, 15, 49
169 to 172	Mobile, operational fixed.	17

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BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
173.20375	Mobile	18, 19, 35
173.2100 .....	.....do	18, 20, 35
173.2375 .....	.....do	18, 19, 36
173.2625 .....	.....do	18, 19, 36
173.2875 .....	.....do	18, 19, 36
173.3125 .....	.....do	18, 19, 36
173.3375 .....	.....do	18, 19, 36
173.3625 .....	.....do	18, 19, 36
173.3900 .....	.....do	18, 20, 35
173.39625 .....	.....do	18, 19, 35
216 to 220	Base or Mobile	21
220–222	Base and mobile	44
406 to 413	Operational fixed	17
450 to 470	Base or Mobile	48
457.5125	Mobile	50
457.525 .....	.....do	4, 14, 22, 23
457.53125 .....	.....do	4, 14, 22, 23, 46
457.53750 .....	.....do	4, 14, 22, 23, 24
457.54375 .....	.....do	4, 14, 22, 23, 46
457.550 .....	.....do	4, 14, 22, 23
457.55625 .....	.....do	4, 14, 22, 23, 46
457.56250 .....	.....do	4, 14, 22, 23, 24
457.56875 .....	.....do	4, 14, 22, 23, 46
457.575 .....	.....do	4, 14, 22, 23
457.58125 .....	.....do	4, 14, 22, 23, 46
457.58750 .....	.....do	4, 14, 22, 23, 24
457.59375 .....	.....do	4, 14, 22, 23, 46
457.600 .....	.....do	4, 14, 22, 23
457.60625 .....	.....do	4, 14, 22, 23, 46
457.61250 .....	.....do	4, 14, 22, 23, 24
457.61875 .....	.....do	4, 14, 22, 23, 46
460.650	Base or Mobile	2, 15, 25, 26
460.65625 .....	.....do	2, 15, 25, 26, 46
460.66250 .....	.....do	2, 15, 24, 25, 26, 53
460.66875 .....	.....do	2, 15, 25, 26, 46
460.675 .....	.....do	2, 15, 25, 26
460.68125 .....	.....do	2, 15, 25, 26, 46
460.68750 .....	.....do	2, 15, 24, 25, 26, 53
460.69375 .....	.....do	2, 15, 25, 26, 46
460.700 .....	.....do	2, 15, 25, 26
460.70625 .....	.....do	2, 15, 25, 26, 46
460.71250 .....	.....do	2, 15, 24, 25, 26, 53
460.71875 .....	.....do	2, 15, 25, 26, 46

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
460.725 .....	.....do	2, 15, 25, 26
460.73125 .....	.....do	2, 15, 25, 26, 46
460.73750 .....	.....do	2, 15, 24, 25, 26, 53
460.74375 .....	.....do	2, 15, 25, 26, 46
460.750 .....	.....do	2, 15, 25, 26
460.75625 .....	.....do	2, 15, 25, 26, 46
460.76250 .....	.....do	2, 15, 24, 25, 26, 53
460.76875 .....	.....do	2, 15, 25, 26, 46
460.775 .....	.....do	2, 15, 25, 26
460.78125 .....	.....do	2, 15, 25, 26, 46
460.78750 .....	.....do	2, 15, 24, 25, 26, 53
460.79375 .....	.....do	2, 15, 25, 26, 46
460.800 .....	.....do	2, 15, 25, 26
460.80625 .....	.....do	2, 15, 25, 26, 46
460.81250 .....	.....do	2, 15, 24, 25, 26, 53
460.81875 .....	.....do	2, 15, 25, 26, 46
460.825 .....	.....do	2, 15, 25, 26
460.83125 .....	.....do	2, 15, 25, 26, 46
460.83750 .....	.....do	2, 15, 24, 25, 26, 53
460.84375 .....	.....do	2, 15, 25, 26, 46
460.850 .....	.....do	2, 15, 25, 26
460.85625 .....	.....do	2, 15, 25, 26, 46
460.86250 .....	.....do	2, 15, 24, 25, 26, 53
460.86875 .....	.....do	2, 15, 25, 26, 46
460.875 .....	.....do	2, 15, 25, 26
460.88125 .....	.....do	2, 15, 25, 26, 46
460.88750 .....	.....do	2, 15, 24, 25, 26, 53
460.89375 .....	.....do	2, 15, 25, 26, 46
460.900 .....	.....do	1, 2, 27, 39, 40
460.90625 .....	.....do	1, 2, 27, 39, 40, 46
460.91250 .....	.....do	1, 2, 24, 27, 39, 40
460.91875 .....	.....do	1, 2, 27, 39, 40, 46
460.925 .....	.....do	1, 2, 27, 39, 40
460.93125 .....	.....do	1, 2, 27, 39, 40, 46
460.93750 .....	.....do	1, 2, 24, 27, 39, 40

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
460.94375	.....do	1, 2, 27, 39, 40, 46
460.950	.....do	1, 2, 27, 39, 40
460.95625	.....do	1, 2, 27, 39, 40, 46
460.96250	.....do	1, 2, 24, 27, 39, 40
460.96875	.....do	1, 2, 27, 39, 40, 46
460.975	.....do	1, 2, 28, 39, 40
460.98125	.....do	1, 2, 28, 39, 40, 46
460.98750	.....do	1, 2, 24, 28, 39, 40
460.99375	.....do	1, 2, 28, 39, 40, 46
461.000	.....do	1, 2, 28, 39, 40
461.00625	.....do	1, 2, 28, 39, 40, 46
461.01250	.....do	1, 2, 24, 28, 39, 40
461.01875	.....do	1, 2, 28, 39, 40, 46
461.025	.....do	1, 2, 26
461.03125	.....do	1, 2, 26, 46
461.03750	.....do	1, 2, 24, 26
461.04375	.....do	1, 2, 26, 46
461.050	.....do	1, 2, 26
461.05625	.....do	1, 2, 26, 46
461.06250	.....do	1, 2, 24, 26
461.06875	.....do	1, 2, 26, 46
461.075	.....do	1, 2, 26
461.08125	.....do	1, 2, 26, 46
461.08750	.....do	1, 2, 24, 26
461.09375	.....do	1, 2, 26, 46
461.100	.....do	1, 2, 26
461.10625	.....do	1, 2, 26, 46
461.11250	.....do	1, 2, 24, 26
461.11875	.....do	1, 2, 26, 46
461.125	.....do	1, 2, 26
461.13125	.....do	1, 2, 26, 46
461.13750	.....do	1, 2, 24, 26
461.14375	.....do	1, 2, 26, 46
461.150	.....do	1, 2, 26
461.15625	.....do	1, 2, 26, 46
461.16250	.....do	1, 2, 24, 26
461.16875	.....do	1, 2, 26, 46
461.175	.....do	1, 2, 26
461.18125	.....do	1, 2, 26, 46
461.18750	.....do	1, 2, 24, 26
461.19375	.....do	1, 2, 26, 46
461.200	.....do	1, 2, 26
461.20625	.....do	1, 2, 26, 46
461.21250	.....do	1, 2, 24, 26
461.21875	.....do	1, 2, 26, 46
461.225	.....do	1, 2, 26
461.23125	.....do	1, 2, 26, 46
461.23750	.....do	1, 2, 24, 26
461.24375	.....do	1, 2, 26, 46
461.250	.....do	1, 2, 26
461.25625	.....do	1, 2, 26, 46
461.26250	.....do	1, 2, 24, 26
461.26875	.....do	1, 2, 26, 46
461.275	.....do	1, 2, 26
461.28125	.....do	1, 2, 26, 46
461.28750	.....do	1, 2, 24, 26
461.29375	.....do	1, 2, 26, 46
461.300	.....do	1, 2, 26

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
461.30625	.....do	1, 2, 26, 46
461.31250	.....do	1, 2, 24, 26
461.31875	.....do	1, 2, 26, 46
461.325	.....do	1, 2, 26
461.33125	.....do	1, 2, 26, 46
461.33750	.....do	1, 2, 24, 26
461.34375	.....do	1, 2, 26, 46
461.350	.....do	1, 2, 26
461.35625	.....do	1, 2, 26, 46
461.36250	.....do	1, 2, 24, 26
461.36875	.....do	1, 2, 26, 46
461.375	.....do	1, 2, 26
461.38125	.....do	1, 2, 26, 46
461.38750	.....do	1, 2, 24, 26
461.39375	.....do	1, 2, 26, 46
461.400	.....do	1, 2, 26
461.40625	.....do	1, 2, 26, 46
461.41250	.....do	1, 2, 24, 26
461.41875	.....do	1, 2, 26, 46
461.425	.....do	1, 2, 26
461.43125	.....do	1, 2, 26, 46
461.43750	.....do	1, 2, 24, 26
461.44375	.....do	1, 2, 26, 46
461.450	.....do	1, 2, 26
461.45625	.....do	1, 2, 26, 46
461.46250	.....do	1, 2, 24, 26
461.46875	.....do	1, 2, 26, 46
461.475	.....do	1, 2, 26
461.48125	.....do	1, 2, 26, 46
461.48750	.....do	1, 2, 24, 26
461.49375	.....do	1, 2, 26, 46
461.500	.....do	1, 2, 26
461.50625	.....do	1, 2, 26, 46
461.51250	.....do	1, 2, 24, 26
461.51875	.....do	1, 2, 26, 46
461.525	.....do	1, 2, 26
461.53125	.....do	1, 2, 26, 46
461.53750	.....do	1, 2, 24, 26
461.54375	.....do	1, 2, 26, 46
461.550	.....do	1, 2, 26
461.55625	.....do	1, 2, 26, 46
461.56250	.....do	1, 2, 24, 26
461.56875	.....do	1, 2, 26, 46
461.575	.....do	1, 2, 26
461.58125	.....do	1, 2, 26, 46
461.58750	.....do	1, 2, 24, 26
461.59375	.....do	1, 2, 26, 46
461.600	.....do	1, 2, 26
461.60625	.....do	1, 2, 26, 46
461.61250	.....do	1, 2, 24, 26
461.61875	.....do	1, 2, 26, 46
461.625	.....do	1, 2, 26
461.63125	.....do	1, 2, 26, 46
461.63750	.....do	1, 2, 24, 26
461.64375	.....do	1, 2, 26, 46
461.650	.....do	1, 2, 26
461.65625	.....do	1, 2, 26, 46
461.66250	.....do	1, 2, 24, 26
461.66875	.....do	1, 2, 26, 46
461.675	.....do	1, 2, 26
461.68125	.....do	1, 2, 26, 46
461.68750	.....do	1, 2, 24, 26
461.69375	.....do	1, 2, 26, 46
461.700	.....do	1, 2, 26
461.70625	.....do	1, 2, 26, 46
461.71250	.....do	1, 2, 24, 26
461.71875	.....do	1, 2, 26, 46
461.725do	1, 2, 26
461.73125do	1, 2, 26, 46
461.73750do	1, 2, 24, 26
461.74375do	1, 2, 26, 46

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BUSINESS RADIO SERVICE FREQUENCY TABLE—
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Frequency or band	Class of station(s)	Limitations
461.750do	1, 2, 26
461.75625do	1, 2, 26, 46
461.76250	.....do	1, 2, 24, 26
461.76875	.....do	1, 2, 26, 46
461.775	.....do	1, 2, 26
461.78125	.....do	1, 2, 26, 46
461.78750	.....do	1, 2, 24, 26
461.79375	.....do	1, 2, 26, 46
461.800	.....do	1, 2, 26
461.80625	.....do	1, 2, 26, 46
461.81250	.....do	1, 2, 24, 26
461.81875	.....do	1, 2, 26, 46
461.825	.....do	1, 2, 26
461.83125	.....do	1, 2, 26, 46
461.83750	.....do	1, 2, 24, 26
461.84375	.....do	1, 2, 26, 46
461.850	.....do	1, 2, 26
461.85625	.....do	1, 2, 26, 46
461.86250	.....do	1, 2, 24, 26
461.86875	.....do	1, 2, 26, 46
461.875	.....do	1, 2, 26
461.88125	.....do	1, 2, 26, 46
461.88750	.....do	1, 2, 24, 26
461.89375	.....do	1, 2, 26, 46
461.900	.....do	1, 2, 26
461.90625	.....do	1, 2, 26, 46
461.91250	.....do	1, 2, 24, 26
461.91875	.....do	1, 2, 26, 46
461.925	.....do	1, 2, 26
461.93125	.....do	1, 2, 26, 46
461.93750	.....do	1, 2, 24, 26
461.94375	.....do	1, 2, 26, 46
461.950	.....do	1, 2, 26
461.95625	.....do	1, 2, 26, 46
461.96250	.....do	1, 2, 24, 26
461.96875	.....do	1, 2, 26, 46
461.975	.....do	1, 2, 26
461.98125	.....do	1, 2, 26, 46
461.98750	.....do	1, 2, 24, 26
461.99375	.....do	1, 2, 26, 46
462.000	.....do	1, 2, 26
462.00625	.....do	1, 2, 26, 46
462.01250	.....do	1, 2, 24, 26
462.01875	.....do	1, 2, 26, 46
462.025	.....do	1, 2, 26
462.03125	.....do	1, 2, 26, 46
462.03750	.....do	1, 2, 24, 26
462.04375	.....do	1, 2, 26, 46
462.050	.....do	1, 2, 26
462.05625	.....do	1, 2, 26, 46
462.06250	.....do	1, 2, 24, 26
462.06875	.....do	1, 2, 26, 46
462.075	.....do	1, 2, 26
462.08125	.....do	1, 2, 26, 46
462.08750	.....do	1, 2, 24, 26
462.09375	.....do	1, 2, 26, 46
462.100	.....do	1, 2, 26
462.10625	.....do	1, 2, 26, 46
462.11250	.....do	1, 2, 24, 26
462.11875	.....do	1, 2, 26, 46
462.125	.....do	1, 2, 26
462.13125	.....do	1, 2, 26, 46
462.13750	.....do	1, 2, 24, 26
462.14375	.....do	1, 2, 26, 46
462.150	.....do	1, 2, 26
462.15625	.....do	1, 2, 26, 46
462.16250	.....do	1, 2, 24, 26
462.16875	.....do	1, 2, 26, 46
462.175	.....do	1, 2, 26
462.18125	.....do	1, 2, 26, 46
462.18750	.....do	1, 2, 24, 26

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
462.19375	.....do	1, 2, 26, 46
462.750	Base	10, 49, 55
462.7625	Mobile	52
462.775	Base	10, 49, 55
462.7875	Mobile	52
462.800	Base	10, 49, 55
462.8125	Mobile	52
462.825	Base	10, 49, 55
462.8375	Mobile	52
462.850	Base	10, 49, 55
462.8625	Mobile	52
462.875	Base	10, 49, 55
462.8875	Mobile	52
462.900	Base	10, 49, 55
462.9125	Mobile	52
462.925	Base	10, 49, 55
462.93750	Mobile	52
462.94375	Base or Mobile	46
463.200	.....do	1, 2, 26
463.20625	.....do	1, 2, 26, 46
463.21250	.....do	1, 2, 24, 26
463.21875	.....do	1, 2, 26, 46
463.225	.....do	1, 2, 26
463.23125	.....do	1, 2, 26, 46
463.23750	.....do	1, 2, 24, 26
463.24375	.....do	1, 2, 26, 46
463.250	.....do	1, 2, 26
463.25625	.....do	1, 2, 26, 46
463.26250	.....do	1, 2, 24, 26
463.26875	.....do	1, 2, 26, 46
463.275	.....do	1, 2, 26
463.28125	.....do	1, 2, 26, 46
463.28750	.....do	1, 2, 24, 26
463.29375	.....do	1, 2, 26, 46
463.300	.....do	1, 2, 26
463.30625	.....do	1, 2, 26, 46
463.31250	.....do	1, 2, 24, 26
463.31875	.....do	1, 2, 26, 46
463.325	.....do	1, 2, 26
463.33125	.....do	1, 2, 26, 46
463.33750	.....do	1, 2, 24, 26
463.34375	.....do	1, 2, 26, 46
463.350	.....do	1, 2, 26
463.35625	.....do	1, 2, 26, 46
463.36250	.....do	1, 2, 24, 26
463.36875	.....do	1, 2, 26, 46
463.375	.....do	1, 2, 26
463.38125	.....do	1, 2, 26, 46
463.38750	.....do	1, 2, 24, 26
463.39375	.....do	1, 2, 26, 46
463.400	.....do	1, 2, 26
463.40625	.....do	1, 2, 26, 46
463.41250	.....do	1, 2, 24, 26
463.41875	.....do	1, 2, 26, 46
463.425	.....do	1, 2, 26
463.43125	.....do	1, 2, 26, 46
463.43750	.....do	1, 2, 24, 26
463.44375	.....do	1, 2, 26, 46
463.450	.....do	1, 2, 26
463.45625	.....do	1, 2, 26, 46
463.46250	.....do	1, 2, 24, 26
463.46875	.....do	1, 2, 26, 46
463.475	.....do	1, 2, 26
463.48125	.....do	1, 2, 26, 46
463.48750	.....do	1, 2, 24, 26
463.49375	.....do	1, 2, 26, 46
463.500	.....do	1, 2, 26
463.50625	.....do	1, 2, 26, 46
463.51250	.....do	1, 2, 24, 26
463.51875	.....do	1, 2, 26, 46
463.525	.....do	1, 2, 26

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
463.53125	.....do	1, 2, 26, 46
463.53750	.....do	1, 2, 24, 26
463.54375	.....do	1, 2, 26, 46
463.550	.....do	1, 2, 26
463.55625	.....do	1, 2, 26, 46
463.56250	.....do	1, 2, 24, 26
463.56875	.....do	1, 2, 26, 46
463.575	.....do	1, 2, 26
463.58125	.....do	1, 2, 26, 46
463.58750	.....do	1, 2, 24, 26
463.59375	.....do	1, 2, 26, 46
463.600	.....do	1, 2, 26
463.60625	.....do	1, 2, 26, 46
463.61250	.....do	1, 2, 24, 26
463.61875	.....do	1, 2, 26, 46
463.625	.....do	1, 2, 26
463.63125	.....do	1, 2, 26, 46
463.63750	.....do	1, 2, 24, 26
463.64375	.....do	1, 2, 26, 46
463.650	.....do	1, 2, 26
463.65625	.....do	1, 2, 26, 46
463.66250	.....do	1, 2, 24, 26
463.66875	.....do	1, 2, 26, 46
463.675	.....do	1, 2, 26
463.68125	.....do	1, 2, 26, 46
463.68750	.....do	1, 2, 24, 26
463.69375	.....do	1, 2, 26, 46
463.700	.....do	1, 2, 26
463.70625	.....do	1, 2, 26, 46
463.71250	.....do	1, 2, 24, 26
463.71875	.....do	1, 2, 26, 46
463.725	.....do	1, 2, 26
463.73125	.....do	1, 2, 26, 46
463.73750	.....do	1, 2, 24, 26
463.74375	.....do	1, 2, 26, 46
463.750	.....do	1, 2, 26
463.75625	.....do	1, 2, 26, 46
463.76250	.....do	1, 2, 24, 26
463.76875	.....do	1, 2, 26, 46
463.775	.....do	1, 2, 26
463.78125	.....do	1, 2, 26, 46
463.78750	.....do	1, 2, 24, 26
463.79375	.....do	1, 2, 26, 46
463.800	.....do	1, 2, 26
463.80625	.....do	1, 2, 26, 46
463.81250	.....do	1, 2, 24, 26
463.81875	.....do	1, 2, 26, 46
463.825	.....do	1, 2, 26
463.83125	.....do	1, 2, 26, 46
463.83750	.....do	1, 2, 24, 26
463.84375	.....do	1, 2, 26, 46
463.850	.....do	1, 2, 26
463.85625	.....do	1, 2, 26, 46
463.86250	.....do	1, 2, 24, 26
463.86875	.....do	1, 2, 26, 46
463.875	.....do	1, 2, 26
463.88125	.....do	1, 2, 26, 46
463.88750	.....do	1, 2, 24, 26
463.89375	.....do	1, 2, 26, 46
463.900	.....do	1, 2, 26
463.90625	.....do	1, 2, 26, 46
463.91250	.....do	1, 2, 24, 26
463.91875	.....do	1, 2, 26, 46
463.925	.....do	1, 2, 26
463.93125	.....do	1, 2, 26, 46
463.93750	.....do	1, 2, 24, 26
463.94375	.....do	1, 2, 26, 46
463.950	.....do	1, 2, 26
463.95625	.....do	1, 2, 26, 46
463.96250	.....do	1, 2, 24, 26
463.96875	.....do	1, 2, 26, 46

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
463.975	.....do	1, 2, 26
463.98125	.....do	1, 2, 26, 46
463.98750	.....do	1, 2, 24, 26
463.99375	.....do	1, 2, 26, 46
464.000	.....do	1, 2, 26
464.00625	.....do	1, 2, 26, 46
464.01250	.....do	1, 2, 24, 26
464.01875	.....do	1, 2, 26, 46
464.025	.....do	1, 2, 26
464.03125	.....do	1, 2, 26, 46
464.03750	.....do	1, 2, 24, 26
464.04375	.....do	1, 2, 26, 46
464.050	.....do	1, 2, 26
464.05625	.....do	1, 2, 26, 46
464.06250	.....do	1, 2, 24, 26
464.06875	.....do	1, 2, 26, 46
464.075	.....do	1, 2, 26
464.08125	.....do	1, 2, 26, 46
464.08750	.....do	1, 2, 24, 26
464.09375	.....do	1, 2, 26, 46
464.100	.....do	1, 2, 26
464.10625	.....do	1, 2, 26, 46
464.11250	.....do	1, 2, 24, 26
464.11875	.....do	1, 2, 26, 46
464.125	.....do	1, 2, 26
464.13125	.....do	1, 2, 26, 46
464.13750	.....do	1, 2, 24, 26
464.14375	.....do	1, 2, 26, 46
464.150	.....do	1, 2, 26
464.15625	.....do	1, 2, 26, 46
464.16250	.....do	1, 2, 24, 26
464.16875	.....do	1, 2, 26, 46
464.175	.....do	1, 2, 26
464.18125	.....do	1, 2, 26, 46
464.18750	.....do	1, 2, 24, 26
464.19375	.....do	1, 2, 26, 46
464.200	.....do	1, 2, 26
464.20625	.....do	1, 2, 26, 46
464.21250	.....do	1, 2, 24, 26
464.21875	.....do	1, 2, 26, 46
464.225	.....do	1, 2, 26
464.23125	.....do	1, 2, 26, 46
464.23750	.....do	1, 2, 24, 26
464.24375	.....do	1, 2, 26, 46
464.250	.....do	1, 2, 26
464.25625	.....do	1, 2, 26, 46
464.26250	.....do	1, 2, 24, 26
464.26875	.....do	1, 2, 26, 46
464.275	.....do	1, 2, 26
464.28125	.....do	1, 2, 26, 46
464.28750	.....do	1, 2, 24, 26
464.29375	.....do	1, 2, 26, 46
464.300	.....do	1, 2, 26
464.30625	.....do	1, 2, 26, 46
464.31250	.....do	1, 2, 24, 26
464.31875	.....do	1, 2, 26, 46
464.325	.....do	1, 2, 26, 29
464.33125	.....do	1, 2, 26, 29, 46
464.33750	.....do	1, 2, 24, 26, 29
464.34375	.....do	1, 2, 26, 29, 46
464.350	.....do	1, 2, 26
464.35625	.....do	1, 2, 26, 46
464.36250	.....do	1, 2, 24, 26
464.36875do	1, 2, 26, 46
464.375do	1, 2, 26, 29
464.38125do	1, 2, 26, 29, 46
464.38750do	1, 2, 24, 26, 29

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BUSINESS RADIO SERVICE FREQUENCY TABLE—
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Frequency or band	Class of station(s)	Limitations
464.39375do	1, 2, 26, 29, 46
464.400do	1, 2, 26
464.40625 .....	.....do	1, 2, 26, 46
464.41250 .....	.....do	1, 2, 24, 26
464.41875 .....	.....do	1, 2, 26, 46
464.425 .....	.....do	1, 2, 26, 29
464.43125 .....	.....do	1, 2, 26, 29, 46
464.43750 .....	.....do	1, 2, 24, 26, 29
464.44375 .....	.....do	1, 2, 26, 29, 46
464.450 .....	.....do	1, 2, 26
464.45625 .....	.....do	1, 2, 26, 46
464.46250 .....	.....do	1, 2, 24, 26
464.46875 .....	.....do	1, 2, 26, 46
464.475 .....	.....do	1, 2, 26, 29
464.48125 .....	.....do	1, 2, 26, 29, 46
464.4875 .....	.....do	1, 2, 24, 26, 29
464.500 .....	.....do	3, 30
464.5125 .....	.....do	1, 2, 24, 26, 29
464.51875 .....	.....do	1, 2, 26, 29, 46
464.525 .....	.....do	1, 2, 26, 29
464.53125 .....	.....do	1, 2, 26, 29, 46
464.5375 .....	.....do	1, 2, 24, 26, 29
464.550 .....	.....do	3, 30
464.5625 .....	.....do	1, 2, 24, 26, 29
464.56875 .....	.....do	1, 2, 26, 29, 46
464.575 .....	.....do	1, 2, 26, 29
464.58125 .....	.....do	1, 2, 26, 29, 46
464.58750 .....	.....do	1, 2, 24, 26, 29
464.59375 .....	.....do	1, 2, 26, 29, 46
464.600 .....	.....do	1, 26
464.60625 .....	.....do	1, 26, 46
464.61250 .....	.....do	1, 24, 26
464.61875 .....	.....do	1, 26, 46
464.625 .....	.....do	1, 26
464.63125 .....	.....do	1, 26, 46
464.63750 .....	.....do	1, 24, 26
464.64375 .....	.....do	1, 26, 46
464.650 .....	.....do	1, 26
464.65625 .....	.....do	1, 26, 46
464.66250 .....	.....do	1, 24, 26
464.66875 .....	.....do	1, 26, 46
464.675 .....	.....do	1, 2, 26, 29
464.68125 .....	.....do	1, 2, 26, 29, 46
464.68750 .....	.....do	1, 2, 24, 26, 29
464.69375 .....	.....do	1, 2, 26, 29, 46
464.700 .....	.....do	1, 26
464.70625 .....	.....do	1, 26, 46
464.71250 .....	.....do	1, 24, 26
464.71875 .....	.....do	1, 26, 46
464.725 .....	.....do	1, 26
464.73125 .....	.....do	1, 26, 46
464.73750 .....	.....do	1, 24, 26
464.74375 .....	.....do	1, 26, 46

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
464.750 .....	.....do	1, 26
464.75625 .....	.....do	1, 26, 46
464.76250 .....	.....do	1, 24, 26
464.76875 .....	.....do	1, 26, 46
464.775 .....	.....do	1, 2, 26, 29
464.78125 .....	.....do	1, 2, 26, 29, 46
464.78750 .....	.....do	1, 2, 24, 26, 29
464.79375 .....	.....do	1, 2, 26, 29, 46
464.800 .....	.....do	1, 2, 26
464.80625 .....	.....do	1, 2, 26, 46
464.81250 .....	.....do	1, 2, 24, 26
464.81875 .....	.....do	1, 2, 26, 46
464.825 .....	.....do	1, 2, 26, 29
464.83125 .....	.....do	1, 2, 26, 29, 46
464.83750 .....	.....do	1, 2, 24, 26, 29
464.84375 .....	.....do	1, 2, 26, 29, 46
464.850 .....	.....do	1, 2, 26
464.85625 .....	.....do	1, 2, 26, 46
464.86250 .....	.....do	1, 2, 24, 26
464.86875 .....	.....do	1, 2, 26, 46
464.875 .....	.....do	1, 2, 26, 29
464.88125 .....	.....do	1, 2, 26, 29, 46
464.88750 .....	.....do	1, 2, 24, 26, 29
464.89375 .....	.....do	1, 2, 26, 29, 46
464.900 .....	.....do	1, 2, 26
464.90625 .....	.....do	1, 2, 26, 46
464.91250 .....	.....do	1, 2, 24, 26
464.91875 .....	.....do	1, 2, 26, 46
464.925 .....	.....do	1, 2, 26, 29
464.93125 .....	.....do	1, 2, 26, 29, 46
464.93750 .....	.....do	1, 2, 24, 26, 29
464.94375 .....	.....do	1, 2, 26, 29, 46
464.950 .....	.....do	1, 2, 26
464.95625 .....	.....do	1, 2, 26, 46
464.96250 .....	.....do	1, 2, 24, 26
464.96875 .....	.....do	1, 2, 26, 46
464.975 .....	.....do	1, 2, 26, 29
464.98125 .....	.....do	1, 2, 26, 29, 46
464.98750	Mobile	52
465.000	Base	10, 30, 49
465.01250	Mobile	52
465.01875 .....	.....do	30, 46
465.650 .....	.....do	2, 4, 25, 26, 31
465.65625 .....	.....do	2, 4, 25, 26, 31, 46
465.66250 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.66875 .....	.....do	2, 4, 25, 26, 31, 46
465.675 .....	.....do	2, 4, 25, 26, 31
465.68125do	2, 4, 25, 26, 31, 46
465.68750do	2, 4, 24, 25, 26, 31, 53
465.69375do	2, 4, 25, 26, 31, 46

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BUSINESS RADIO SERVICE FREQUENCY TABLE—
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Frequency or band	Class of station(s)	Limitations
465.700do	2, 4, 25, 26, 31
465.70625do	2, 4, 25, 26, 31, 46
465.71250 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.71875 .....	.....do	2, 4, 25, 26, 31, 46
465.725 .....	.....do	2, 4, 25, 26, 31
465.73125 .....	.....do	2, 4, 25, 26, 31, 46
465.73750 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.74375 .....	.....do	2, 4, 25, 26, 31, 46
465.750 .....	.....do	2, 4, 25, 26, 31
465.75625 .....	.....do	2, 4, 25, 26, 31, 46
465.76250 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.76875 .....	.....do	2, 4, 25, 26, 31, 46
465.775 .....	.....do	2, 4, 25, 26, 31
465.78125 .....	.....do	2, 4, 25, 26, 31, 46
465.78750 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.79375 .....	.....do	2, 4, 25, 26, 31, 46
465.800 .....	.....do	2, 4, 25, 26, 31
465.80625 .....	.....do	2, 4, 25, 26, 31, 46
465.81250 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.81875 .....	.....do	2, 4, 25, 26, 31, 46
465.825 .....	.....do	2, 4, 25, 26, 31
465.83125 .....	.....do	2, 4, 25, 26, 31, 46
465.83750 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.84375 .....	.....do	2, 4, 25, 26, 31, 46
465.850 .....	.....do	2, 4, 25, 26, 31
465.85625 .....	.....do	2, 4, 25, 26, 31, 46
465.86250 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.86875 .....	.....do	2, 4, 25, 26, 31, 46
465.875 .....	.....do	2, 4, 25, 26, 31
465.88125 .....	.....do	2, 4, 25, 26, 31, 46
465.88750 .....	.....do	2, 4, 24, 25, 26, 31, 53
465.89375 .....	.....do	2, 4, 25, 26, 31, 46
465.900 .....	.....do	1, 2, 27, 39
465.90625 .....	.....do	1, 2, 27, 39, 46
465.91250 .....	.....do	1, 2, 24, 27, 39
465.91875 .....	.....do	1, 2, 27, 39, 46

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
465.925 .....	.....do	1, 2, 27, 39
465.93125 .....	.....do	1, 2, 27, 39, 46
465.93750 .....	.....do	1, 2, 24, 27, 39
465.94375 .....	.....do	1, 2, 27, 39, 46
465.950 .....	.....do	1, 2, 27, 39
465.95625 .....	.....do	1, 2, 27, 39, 46
465.96250 .....	.....do	1, 2, 24, 27, 39
465.96875 .....	.....do	1, 2, 27, 39, 46
465.975 .....	.....do	1, 2, 28, 39
465.98125 .....	.....do	1, 2, 28, 39, 46
465.98750 .....	.....do	1, 2, 24, 28, 39
465.99375 .....	.....do	1, 2, 28, 39, 46
466.000 .....	.....do	1, 2, 28, 39
466.00625 .....	.....do	1, 2, 28, 39, 46
466.01250 .....	.....do	1, 2, 24, 28, 39, 53
466.01875 .....	.....do	1, 2, 28, 39, 46
466.025 .....	.....do	1, 2, 26
466.03125 .....	.....do	1, 2, 26, 46
466.03750 .....	.....do	1, 2, 24, 26
466.04375 .....	.....do	1, 2, 26, 46
466.050 .....	.....do	1, 2, 26
466.05625 .....	.....do	1, 2, 26, 46
466.06250 .....	.....do	1, 2, 24, 26
466.06875 .....	.....do	1, 2, 26, 46
466.075 .....	.....do	1, 2, 26
466.08125 .....	.....do	1, 2, 26, 46
466.08750 .....	.....do	1, 2, 24, 26
466.09375 .....	.....do	1, 2, 26, 46
466.100 .....	.....do	1, 2, 26
466.10625 .....	.....do	1, 2, 26, 46
466.11250 .....	.....do	1, 2, 24, 26
466.11875 .....	.....do	1, 2, 26, 46
466.125 .....	.....do	1, 2, 26
466.13125 .....	.....do	1, 2, 26, 46
466.13750 .....	.....do	1, 2, 24, 26
466.14375 .....	.....do	1, 2, 26, 46
466.150 .....	.....do	1, 2, 26
466.15625 .....	.....do	1, 2, 26, 46
466.16250 .....	.....do	1, 2, 24, 26
466.16875 .....	.....do	1, 2, 26, 46
466.175 .....	.....do	1, 2, 26
466.18125 .....	.....do	1, 2, 26, 46
466.18750 .....	.....do	1, 2, 24, 26
466.19375 .....	.....do	1, 2, 26, 46
466.200 .....	.....do	1, 2, 26
466.20625 .....	.....do	1, 2, 26, 46
466.21250 .....	.....do	1, 2, 24, 26
466.21875 .....	.....do	1, 2, 26, 46
466.225 .....	.....do	1, 2, 26
466.23125 .....	.....do	1, 2, 26, 46
466.23750 .....	.....do	1, 2, 24, 26
466.24375 .....	.....do	1, 2, 26, 46
466.250 .....	.....do	1, 2, 26
466.25625 .....	.....do	1, 2, 26, 46
466.26250 .....	.....do	1, 2, 24, 26
466.26875do	1, 2, 26, 46
466.275do	1, 2, 26
466.28125do	1, 2, 26, 46
466.28750do	1, 2, 24, 26

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BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations	Frequency or band	Class of station(s)	Limitations
466.29375	...do	1, 2, 26, 46	466.73750	...do	1, 2, 24, 26
466.300	...do	1, 2, 26	466.74375	...do	1, 2, 26, 46
466.30625	...do	1, 2, 26, 46	466.750	...do	1, 2, 26
466.31250	...do	1, 2, 24, 26	466.75625	...do	1, 2, 26, 46
466.31875	...do	1, 2, 26, 46	466.76250	...do	1, 2, 24, 26
466.325	...do	1, 2, 26	466.76875	...do	1, 2, 26, 46
466.33125	...do	1, 2, 26, 46	466.775	...do	1, 2, 26
466.33750	...do	1, 2, 24, 26	466.78125	...do	1, 2, 26, 46
466.34375	...do	1, 2, 26, 46	466.78750	...do	1, 2, 24, 26
466.350	...do	1, 2, 26	466.79375	...do	1, 2, 26, 46
466.35625	...do	1, 2, 26, 46	466.800	...do	1, 2, 26
466.36250	...do	1, 2, 24, 26	466.80625	...do	1, 2, 26, 46
466.36875	...do	1, 2, 26, 46	466.81250	...do	1, 2, 24, 26
466.375	...do	1, 2, 26	466.81875	...do	1, 2, 26, 46
466.38125	...do	1, 2, 26, 46	466.825	...do	1, 2, 26
466.38750	...do	1, 2, 24, 26	466.83125	...do	1, 2, 26, 46
466.39375	...do	1, 2, 26, 46	466.83750	...do	1, 2, 24, 26
466.400	...do	1, 2, 26	466.84375	...do	1, 2, 26, 46
466.40625	...do	1, 2, 26, 46	466.850	...do	1, 2, 26
466.41250	...do	1, 2, 24, 26	466.85625	...do	1, 2, 26, 46
466.41875	...do	1, 2, 26, 46	466.86250	...do	1, 2, 24, 26
466.425	...do	1, 2, 26	466.86875	...do	1, 2, 26, 46
466.43125	...do	1, 2, 26, 46	466.875	...do	1, 2, 26
466.43750	...do	1, 2, 24, 26	466.88125	...do	1, 2, 26, 46
466.44375	...do	1, 2, 26, 46	466.88750	...do	1, 2, 24, 26
466.450	...do	1, 2, 26	466.89375	...do	1, 2, 26, 46
466.45625	...do	1, 2, 26, 46	466.900	...do	1, 2, 26
466.46250	...do	1, 2, 24, 26	466.90625	...do	1, 2, 26, 46
466.46875	...do	1, 2, 26, 46	466.91250	...do	1, 2, 24, 26
466.475	...do	1, 2, 26	466.91875	...do	1, 2, 26, 46
466.48125	...do	1, 2, 26, 46	466.925	...do	1, 2, 26
466.48750	...do	1, 2, 24, 26	466.93125	...do	1, 2, 26, 46
466.49375	...do	1, 2, 26, 46	466.93750	...do	1, 2, 24, 26
466.500	...do	1, 2, 26	466.94375	...do	1, 2, 26, 46
466.50625	...do	1, 2, 26, 46	466.950	...do	1, 2, 26
466.51250	...do	1, 2, 24, 26	466.95625	...do	1, 2, 26, 46
466.51875	...do	1, 2, 26, 46	466.96250	...do	1, 2, 24, 26
466.525	...do	1, 2, 26	466.96875	...do	1, 2, 26, 46
466.53125	...do	1, 2, 26, 46	466.975	...do	1, 2, 26
466.53750	...do	1, 2, 24, 26	466.98125	...do	1, 2, 26, 46
466.54375	...do	1, 2, 26, 46	466.98750	...do	1, 2, 24, 26
466.550	...do	1, 2, 26	466.99375	...do	1, 2, 26, 46
466.55625	...do	1, 2, 26, 46	467.000	...do	1, 2, 26
466.56250	...do	1, 2, 24, 26	467.00625	...do	1, 2, 26, 46
466.56875	...do	1, 2, 26, 46	467.01250	...do	1, 2, 24, 26
466.575	...do	1, 2, 26	467.01875	...do	1, 2, 26, 46
466.58125	...do	1, 2, 26, 46	467.025	...do	1, 2, 26
466.58750	...do	1, 2, 24, 26	467.03125	...do	1, 2, 26, 46
466.59375	...do	1, 2, 26, 46	467.03750	...do	1, 2, 24, 26
466.600	...do	1, 2, 26	467.04375	...do	1, 2, 26, 46
466.60625	...do	1, 2, 26, 46	467.050	...do	1, 2, 26
466.61250	...do	1, 2, 24, 26	467.05625	...do	1, 2, 26, 46
466.61875	...do	1, 2, 26, 46	467.06250	...do	1, 2, 24, 26
466.625	...do	1, 2, 26	467.06875	...do	1, 2, 26, 46
466.63125	...do	1, 2, 26, 46	467.075	...do	1, 2, 26
466.63750	...do	1, 2, 24, 26	467.08125	...do	1, 2, 26, 46
466.64375	...do	1, 2, 26, 46	467.08750	...do	1, 2, 24, 26
466.650	...do	1, 2, 26	467.09375	...do	1, 2, 26, 46
466.65625	...do	1, 2, 26, 46	467.100	...do	1, 2, 26
466.66250	...do	1, 2, 24, 26	467.10625	...do	1, 2, 26, 46
466.66875	...do	1, 2, 26, 46	467.11250	...do	1, 2, 24, 26
466.675	...do	1, 2, 26	467.11875	...do	1, 2, 26, 46
466.68125	...do	1, 2, 26, 46	467.125	...do	1, 2, 26
466.68750	...do	1, 2, 24, 26	467.13125	...do	1, 2, 26, 46
466.69375	...do	1, 2, 26, 46	467.13750	...do	1, 2, 24, 26
466.700	...do	1, 2, 26	467.14375	...do	1, 2, 26, 46
466.70625	...do	1, 2, 26, 46	467.150	...do	1, 2, 26
466.71250	...do	1, 2, 24, 26	467.15625	...do	1, 2, 26, 46
466.71875	...do	1, 2, 26, 46	467.16250	...do	1, 2, 24, 26
466.725	...do	1, 2, 26	467.16875	...do	1, 2, 26, 46
466.73125	...do	1, 2, 26, 46	467.175	...do	1, 2, 26

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
467.18125 .....	.....do	1, 2, 26, 46
467.18750 .....	.....do	1, 2, 24, 26
467.19375 .....	.....do	1, 2, 26, 46
467.74375 .....	.....do	1, 2, 26, 46
467.750 .....	.....do	4, 13, 22, 23
467.75625 .....	.....do	4, 13, 22, 23, 46
467.76250 .....	.....do	4, 13, 22, 23, 24
467.76875 .....	.....do	4, 13, 22, 23, 46
467.775 .....	.....do	4, 13, 22, 23
467.78125 .....	.....do	4, 13, 22, 23, 46
467.78750 .....	.....do	4, 13, 22, 23, 24
467.79375 .....	.....do	4, 13, 22, 23, 46
467.800 .....	.....do	4, 13, 22, 23
467.80625 .....	.....do	4, 13, 22, 23, 46
467.81250 .....	.....do	4, 13, 22, 23, 24
467.81875 .....	.....do	4, 13, 22, 23, 46
467.825 .....	.....do	4, 13, 22, 23
467.83125 .....	.....do	4, 13, 22, 23, 46
467.8375 .....	.....do	4, 13, 22, 23, 46
467.850 .....	.....do	4, 13, 22, 52
467.8625 .....	.....do	4, 13, 22, 52
467.875 .....	.....do	4, 13, 22, 52
467.8875 .....	.....do	4, 13, 22, 52
467.900 .....	.....do	4, 13, 22, 52
467.9125 .....	.....do	4, 13, 22, 52
467.925 .....	.....do	4, 13, 22, 52
467.93125 .....	.....do	1, 2, 46
467.9375 .....	.....do	24, 52
467.94375 .....	.....do	1, 2, 46
468.200 .....	.....do	1, 2, 26
468.20625 .....	.....do	1, 2, 26, 46
468.21250 .....	.....do	1, 2, 24, 26
468.21875 .....	.....do	1, 2, 26, 46
468.225 .....	.....do	1, 2, 26
468.23125 .....	.....do	1, 2, 26, 46
468.23750 .....	.....do	1, 2, 24, 26
468.24375 .....	.....do	1, 2, 26, 46
468.250 .....	.....do	1, 2, 26
468.25625 .....	.....do	1, 2, 26, 46
468.26250 .....	.....do	1, 2, 24, 26
468.26875 .....	.....do	1, 2, 26, 46
468.275 .....	.....do	1, 2, 26
468.28125 .....	.....do	1, 2, 26, 46
468.28750 .....	.....do	1, 2, 24, 26
468.29375 .....	.....do	1, 2, 26, 46
468.300 .....	.....do	1, 2, 26
468.30625 .....	.....do	1, 2, 26, 46
468.31250 .....	.....do	1, 2, 24, 26
468.31875 .....	.....do	1, 2, 26, 46
468.325 .....	.....do	1, 2, 26
468.33125 .....	.....do	1, 2, 26, 46
468.33750 .....	.....do	1, 2, 24, 26
468.34375 .....	.....do	1, 2, 26, 46
468.350 .....	.....do	1, 2, 26
468.35625 .....	.....do	1, 2, 26, 46
468.36250 .....	.....do	1, 2, 24, 26

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
468.36875 .....	.....do	1, 2, 26, 46
468.375 .....	.....do	1, 2, 26
468.38125 .....	.....do	1, 2, 26, 46
468.38750 .....	.....do	1, 2, 24, 26
468.39375 .....	.....do	1, 2, 26, 46
468.400 .....	.....do	1, 2, 26
468.40625 .....	.....do	1, 2, 26, 46
468.41250 .....	.....do	1, 2, 24, 26
468.41875 .....	.....do	1, 2, 26, 46
468.425 .....	.....do	1, 2, 26
468.43125 .....	.....do	1, 2, 26, 46
468.43750 .....	.....do	1, 2, 24, 26
468.44375 .....	.....do	1, 2, 26, 46
468.450 .....	.....do	1, 2, 26
468.45625 .....	.....do	1, 2, 26, 46
468.46250 .....	.....do	1, 2, 24, 26
468.46875 .....	.....do	1, 2, 26, 46
468.475 .....	.....do	1, 2, 26
468.48125 .....	.....do	1, 2, 26, 46
468.48750 .....	.....do	1, 2, 24, 26
468.49375 .....	.....do	1, 2, 26, 46
468.500 .....	.....do	1, 2, 26
468.50625 .....	.....do	1, 2, 26, 46
468.51250 .....	.....do	1, 2, 24, 26
468.51875 .....	.....do	1, 2, 26, 46
468.525 .....	.....do	1, 2, 26
468.53125 .....	.....do	1, 2, 26, 46
468.53750 .....	.....do	1, 2, 24, 26
468.54375 .....	.....do	1, 2, 26, 46
468.550 .....	.....do	1, 2, 26
468.55625 .....	.....do	1, 2, 26, 46
468.56250 .....	.....do	1, 2, 24, 26
468.56875 .....	.....do	1, 2, 26, 46
468.575 .....	.....do	1, 2, 26
468.58125 .....	.....do	1, 2, 26, 46
468.58750 .....	.....do	1, 2, 24, 26
468.59375 .....	.....do	1, 2, 26, 46
468.600 .....	.....do	1, 2, 26
468.60625 .....	.....do	1, 2, 26, 46
468.61250 .....	.....do	1, 2, 24, 26
468.61875 .....	.....do	1, 2, 26, 46
468.625 .....	.....do	1, 2, 26
468.63125 .....	.....do	1, 2, 26, 46
468.63750 .....	.....do	1, 2, 24, 26
468.64375 .....	.....do	1, 2, 26, 46
468.650 .....	.....do	1, 2, 26
468.65625 .....	.....do	1, 2, 26, 46
468.66250 .....	.....do	1, 2, 24, 26
468.66875 .....	.....do	1, 2, 26, 46
468.675 .....	.....do	1, 2, 26
468.68125 .....	.....do	1, 2, 26, 46
468.68750 .....	.....do	1, 2, 24, 26
468.69375 .....	.....do	1, 2, 26, 46
468.700 .....	.....do	1, 2, 26
468.70625 .....	.....do	1, 2, 26, 46
468.71250 .....	.....do	1, 2, 24, 26
468.71875 .....	.....do	1, 2, 26, 46
468.725 .....	.....do	1, 2, 26
468.73125 .....	.....do	1, 2, 26, 46
468.73750 .....	.....do	1, 2, 24, 26
468.74375 .....	.....do	1, 2, 26, 46
468.750 .....	.....do	1, 2, 26
468.75625 .....	.....do	1, 2, 26, 46
468.76250 .....	.....do	1, 2, 24, 26
468.76875 .....	.....do	1, 2, 26, 46
468.775 .....	.....do	1, 2, 26
468.78125 .....	.....do	1, 2, 26, 46
468.78750do	1, 2, 24, 26
468.79375do	1, 2, 26, 46
468.800do	1, 2, 26
468.80625do	1, 2, 26, 46

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BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
468.81250	.....do	1, 2, 24, 26
468.81875	.....do	1, 2, 26, 46
468.825	.....do	1, 2, 26
468.83125	.....do	1, 2, 26, 46
468.83750	.....do	1, 2, 24, 26
468.84375	.....do	1, 2, 26, 46
468.850	.....do	1, 2, 26
468.85625	.....do	1, 2, 26, 46
468.86250	.....do	1, 2, 24, 26
468.86875	.....do	1, 2, 26, 46
468.875	.....do	1, 2, 26
468.88125	.....do	1, 2, 26, 46
468.88750	.....do	1, 2, 24, 26
468.89375	.....do	1, 2, 26, 46
468.900	.....do	1, 2, 26
468.90625	.....do	1, 2, 26, 46
468.91250	.....do	1, 2, 24, 26
468.91875	.....do	1, 2, 26, 46
468.925	.....do	1, 2, 26
468.93125	.....do	1, 2, 26, 46
468.93750	.....do	1, 2, 24, 26
468.94375	.....do	1, 2, 26, 46
468.950	.....do	1, 2, 26
468.95625	.....do	1, 2, 26, 46
468.96250	.....do	1, 2, 24, 26
468.96875	.....do	1, 2, 26, 46
468.975	.....do	1, 2, 26
468.98125	.....do	1, 2, 26, 46
468.98750	.....do	1, 2, 24, 26
468.99375	.....do	1, 2, 26, 46
469.000	.....do	1, 2, 26
469.00625	.....do	1, 2, 26, 46
469.01250	.....do	1, 2, 24, 26
469.01875	.....do	1, 2, 26, 46
469.025	.....do	1, 2, 26
469.03125	.....do	1, 2, 26, 46
469.03750	.....do	1, 2, 24, 26
469.04375	.....do	1, 2, 26, 46
469.050	.....do	1, 2, 26
469.05625	.....do	1, 2, 26, 46
469.06250	.....do	1, 2, 24, 26
469.06875	.....do	1, 2, 26, 46
469.075	.....do	1, 2, 26
469.08125	.....do	1, 2, 26, 46
469.08750	.....do	1, 2, 24, 26
469.09375	.....do	1, 2, 26, 46
469.100	.....do	1, 2, 26
469.10625	.....do	1, 2, 26, 46
469.11250	.....do	1, 2, 24, 26
469.11875	.....do	1, 2, 26, 46
469.125	.....do	1, 2, 26
469.13125	.....do	1, 2, 26, 46
469.13750	.....do	1, 2, 24, 26
469.14375	.....do	1, 2, 26, 46
469.150	.....do	1, 2, 26
469.15625	.....do	1, 2, 26, 46
469.16250	.....do	1, 2, 24, 26
469.16875	.....do	1, 2, 26, 46
469.175	.....do	1, 2, 26
469.18125	.....do	1, 2, 26, 46
469.18750	.....do	1, 2, 24, 26
469.19375	.....do	1, 2, 26, 46
469.200	.....do	1, 2, 26
469.20625	.....do	1, 2, 26, 46
469.21250	.....do	1, 2, 24, 26
469.21875	.....do	1, 2, 26, 46
469.225	.....do	1, 2, 26
469.23125	.....do	1, 2, 26, 46
469.23750	.....do	1, 2, 24, 26
469.24375	.....do	1, 2, 26, 46
469.250	.....do	1, 2, 26

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
469.25625	.....do	1, 2, 26, 46
469.26250	.....do	1, 2, 24, 26
469.26875	.....do	1, 2, 26, 46
469.275	.....do	1, 2, 26
469.28125	.....do	1, 2, 26, 46
469.28750	.....do	1, 2, 24, 26
469.29375	.....do	1, 2, 26, 46
469.300	.....do	1, 2, 26
469.30625	.....do	1, 2, 26, 46
469.31250	.....do	1, 2, 24, 26
469.31875	.....do	1, 2, 26, 46
469.325	.....do	1, 2, 26
469.33125	.....do	1, 2, 26, 46
469.33750	.....do	1, 2, 24, 26
469.34375	.....do	1, 2, 26, 46
469.350	.....do	1, 2, 26
469.35625	.....do	1, 2, 26, 46
469.36250	.....do	1, 2, 24, 26
469.36875	.....do	1, 2, 26, 46
469.375	.....do	1, 2, 26
469.38125	.....do	1, 2, 26, 46
469.38750	.....do	1, 2, 24, 26
469.39375	.....do	1, 2, 26, 46
469.400	.....do	1, 2, 26
469.40625	.....do	1, 2, 26, 46
469.41250	.....do	1, 2, 24, 26
469.41875	.....do	1, 2, 26, 46
469.425	.....do	1, 2, 26
469.43125	.....do	1, 2, 26, 46
469.43750	.....do	1, 2, 24, 26
469.44375	.....do	1, 2, 26, 46
469.450	.....do	1, 2, 26
469.45625	.....do	1, 2, 26, 46
469.46250	.....do	1, 2, 24, 26
469.46875	.....do	1, 2, 26, 46
469.475	.....do	1, 2, 26
469.48125	.....do	1, 2, 26, 46
469.4875	.....do	1, 2, 24, 26
469.500	.....do	3, 30, 47
469.5125	.....do	1, 2, 24, 26
469.51875	.....do	1, 2, 26, 46
469.525	.....do	1, 2, 26
469.53125	.....do	1, 2, 26, 46
469.5375	.....do	1, 2, 24, 26
469.550	.....do	3, 30, 47
469.5625	.....do	1, 2, 24, 26
469.56875	.....do	1, 2, 26, 46
469.575	.....do	1, 2, 26
469.58125	.....do	1, 2, 26, 46
469.58750	.....do	1, 2, 24, 26
469.59375	.....do	1, 2, 26, 46
469.600	.....do	1, 26
469.60625	.....do	1, 26, 46
469.61250	.....do	1, 24, 26
469.61875	.....do	1, 26, 46
469.625	.....do	1, 26
469.63125	.....do	1, 26, 46
469.63750	.....do	1, 24, 26
469.64375	.....do	1, 26, 46
469.650	.....do	1, 26
469.65625	.....do	1, 26, 46
469.66250	.....do	1, 24, 26
469.66875	.....do	1, 26, 46
469.675	.....do	1, 2, 26
469.68125	.....do	1, 2, 26, 46
469.68750	.....do	1, 2, 24, 26
469.69375	.....do	1, 2, 26, 46
469.700	.....do	1, 26
469.70625	.....do	1, 26, 46
469.71250	.....do	1, 24, 26
469.71875	.....do	1, 26, 46

BUSINESS RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
469.725 .....	.....do	1, 26
469.73125 .....	.....do	1, 26, 46
469.73750 .....	.....do	1, 24, 26
469.74375 .....	.....do	1, 26, 46
469.750 .....	.....do	1, 26
469.75625 .....	.....do	1, 26, 46
469.76250 .....	.....do	1, 24, 26
469.76875 .....	.....do	1, 26, 46
469.775 .....	.....do	1, 2, 26
469.78125 .....	.....do	1, 2, 26, 46
469.78750 .....	.....do	1, 2, 24, 26
469.79375 .....	.....do	1, 2, 26, 46
469.800 .....	.....do	1, 2, 26
469.80625 .....	.....do	1, 2, 26, 46
469.81250 .....	.....do	1, 2, 24, 26
469.81875 .....	.....do	1, 2, 26, 46
469.825 .....	.....do	1, 2, 26
469.83125 .....	.....do	1, 2, 26, 46
469.83750 .....	.....do	1, 2, 24, 26
469.84375 .....	.....do	1, 2, 26, 46
469.850 .....	.....do	1, 2, 26
469.85625 .....	.....do	1, 2, 26, 46
469.8625 .....	.....do	1, 2, 24, 26
469.86875 .....	.....do	1, 2, 26, 46
469.875 .....	.....do	1, 2, 26
469.88125 .....	.....do	1, 2, 26, 46
469.88750 .....	.....do	1, 2, 24, 26
469.89375 .....	.....do	1, 2, 26, 46
469.900 .....	.....do	1, 2, 26
469.90625 .....	.....do	1, 2, 26, 46
469.91250 .....	.....do	1, 2, 24, 26
469.91875 .....	.....do	1, 2, 26, 46
469.925 .....	.....do	1, 2, 26
469.93125 .....	.....do	1, 2, 26, 46
469.93750 .....	.....do	1, 2, 24, 26
469.94375 .....	.....do	1, 2, 26, 46
469.950 .....	.....do	1, 2, 26
469.95625 .....	.....do	1, 2, 26, 46
469.96250 .....	.....do	1, 2, 24, 26
469.96875 .....	.....do	1, 2, 26, 46
469.975 .....	.....do	1, 2, 26
469.98125 .....	.....do	1, 2, 26, 46
470 to 512	Base or Mobile	32
806 to 821	Mobile	33
851 to 866	Base or Mobile	33
896 to 901	Mobile	33
928 and above	Operational fixed	34
929–930	Base only	42
935 to 940	Base or Mobile	33
1427 to 1435	Operational fixed, base or mobile.	21
2450 to 2500	Base or Mobile	43
10,550 to 10,680*	Base or Mobile .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) Operation on this frequency is limited to a maximum output power of 110 watts.

(2) This frequency will be assigned only for operation in a permanent area,

normally within 120 km (75 mi.) of a specified reference point.

(3) This frequency will be assigned only to stations used in itinerant operations, except within 56 km (35 miles) of Detroit, Mich., where it may be assigned for either itinerant or permanent area operations (i.e., general use).

(4) Operation on this frequency is limited to a maximum output power of 2 watts; and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may provide the operational functions of a base or fixed station on a secondary basis to mobile service operations, *Provided*, That the separation between the control point and the center of the radiating portion of the antenna of any units so used does not exceed 8 m (25 ft.).

(5) This frequency is also available in the Special Emergency Radio Service for low power paging use on a co-equal basis.

(6) Operation on this frequency is limited to a maximum output power of 1 watt and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may provide the operational functions of a base or fixed station on a secondary basis to mobile service operations, *Provided*, That the separation between the control point and the center of the radiating portion of the antenna of any units so used does not exceed 8 m (25 ft.).

(7) The frequencies available in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(8) Use of this frequency in this service is limited to stations located in Puerto Rico and the Virgin Islands.

(9) This frequency is shared with Taxicab Radio Service and is available for assignment in the Business Radio Service only to stations which are used exclusively in areas outside of Standard Metropolitan Statistical Areas of 50,000 or more population (1950 Census). Operations on this frequency are on a secondary basis to operations in the Taxicab Radio Service.

(10) This frequency is assigned only for one-way paging communications to

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mobile receivers. Only A1D, A2D, A3E, F1D, F2D, F3E, or G3E emissions may be authorized. Licensees may provide one-way paging communications on this frequency to individuals, persons eligible for licensing under subpart B, C, D, or E of this part, to representatives of Federal Government agencies, and foreign governments and their representatives.

(11) This frequency is also available for base or mobile stations in the Special Industrial and Forest Products Radio Services on a secondary basis to paging operations in the Business Radio Service.

(12) This frequency will not be assigned to stations for use at temporary locations.

(13) This frequency may be used for mobile operation for radio remote control and telemetering functions. A1D, A2D, F1D, or F2D emission may be authorized and mobile stations used to control remote objects or devices may be operated on the continuous carrier transmit mode.

(14) This frequency may be used for mobile operation for remote control and telemetering functions. A1D, A2D, F1D, or F2D emission may be authorized. The use of the continuous carrier transmit mode for these purposes is permitted only for stations authorized and continuously licensed since before May 21, 1971.

(15) Except as noted in paragraph (c)(25), operation on this frequency is limited to a maximum output power of 20 watts.

(16) Operation on this frequency is limited to a maximum output power of 75 watts.

(17) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of §90.265.

(18) This frequency is available on a shared basis with other Industrial Radio Services as follows: Power, Forest Products, Special Industrial, Petroleum, Manufacturers, Business, and the Local Government Radio Service and may be used in this service only for the purpose of remote control and telemetering.

(19) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 2.8 kHz and the maximum frequency deviation may not exceed 2.5 kHz. For AM transmitters the highest modulating frequency may not exceed 2.0 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 6 kHz.

(20) For FM transmitters the sum of the highest modulating frequency and the amount of frequency deviation may not exceed 1.7 kHz, and the maximum frequency deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1.5 kHz. The carrier frequency must be maintained within 0.0005 percent and the authorized bandwidth may not exceed 3 kHz.

(21) This frequency band is available to stations in this service subject to the provisions of §90.259.

(22) This frequency may not be used aboard aircraft in flight.

(23) Frequencies subject to this assignment limitation are herein considered collectively for use for communications concerned with cargo handling from a dock, or a cargo handling facility, to a vessel alongside. Any number of the frequencies may be authorized to one licensee for the purpose. Mobile relay stations may be temporarily installed at or in the vicinity of a dock or cargo handling facility and used when a vessel is alongside the dock or cargo handling facility.

Mobile relay (MHz)	Mobile (MHz)
457.525	467.750
457.53125	467.75625
457.5375	467.7625
457.54375	467.76875
457.550	467.775
457.55625	467.78125
457.5625	467.7875
457.56875	467.79375
457.575	467.800
457.58125	467.80625
457.5875	467.8125
457.59375	467.81875
457.600	467.825
457.60625	467.83125
457.6125 .....	.....
457.61875 .....	.....

For single frequency simplex: Use mobile relay frequencies. The effective radiated power (ERP) on any frequency

shall not exceed 2 watts. The center of the radiating system of the on-board repeater antenna shall be located no more than 3 m (10 ft.) above the vessel's highest working deck.

(24) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(25) This frequency is available for assignment as follows:

(i) To persons furnishing commercial air transportation service or, pursuant to §90.179, to an entity furnishing radio communications service to persons so engaged, for stations located on or near the airports listed in paragraph (c)(25)(iv) of this section. Stations will be authorized on a primary basis and may be used only in connection with the servicing and supplying of aircraft.

(ii) To stations in the Business Radio Service for secondary use at locations 80 km (50 mi) or more from the coordinates of the listed airports at a maximum ERP of 300 watts.

(iii) To stations in the Business Radio Service for secondary use at locations 16 km (10 mi) or more from the coordinates of the listed airports at a maximum transmitter output power of 2 watts. Use of the frequency is restricted to the confines of an industrial complex or manufacturing yard area. Stations licensed prior to April 17, 1986 may continue to operate with facilities authorized as of that date.

(iv) The airports and their respective reference coordinates are:

City and airport	Reference coordinates	
	Latitude	Longitude
<i>Akron, OH:</i> Akron-Canton Regional (CAK).	40°55'01' N	81°26'30' W
<i>Albany-Troy-Schenectady, NY:</i> Albany County (ALB)	42°44'53' N	73°48'12' W
<i>Albuquerque, NM:</i> Albuquerque International (ABQ).	35°02'30' N	106°36'23' W
<i>Allentown-Bethlehem, PA:</i> Allentown-Bethlehem-Easton (ABE).	40°39'11' N	75°26'25' W
<i>Anchorage, AK:</i> Anchorage International (ANC).	61°10'30' N	149°59'38' W

City and airport	Reference coordinates	
	Latitude	Longitude
<i>Atlanta, GA:</i> Atlanta International (ATL).	33°38'25' N	84°25'37' W
Dekalb-Peachtree (PDK).	33°52'30' N	84°18'08' W
Fulton County (FTY) ..	33°46'45' N	84°31'17' W
<i>Baltimore, MD:</i> Baltimore-Washington Int'l (BWI).	39°10'30' N	76°40'10' W
<i>Birmingham, AL:</i> Birmingham Municipal (BHM).	33°33'50' N	86°45'16' W
<i>Boston, MA:</i> Logan International (BOS).	42°21'51' N	71°00'21' W
<i>Bridgeport, CT:</i> Sikorsky Memorial (BDR).	41°09'49' N	73°07'35' W
<i>Buffalo, NY:</i> Greater Buffalo Int'l (BUF).	42°56'26' N	78°43'57' W
<i>Canton, OH:</i> Akron-Canton Regional (CAK).	40°55'01' N	81°26'30' W
<i>Charlotte, NC:</i> Charlotte-Douglas Int'l (CLT).	35°12'52' N	80°56'37' W
<i>Chattanooga, TN:</i> Lovell (CHA)	35°02'07' N	85°12'15' W
<i>Chicago, IL-Northwest, IN:</i> Chicago-Wheeling-Palwaukee (PWK).	42°06'48' N	87°54'03' W
Meigs (CGX)	41°51'32' N	87°36'28' W
Michiana Regional (SBN).	41°42'18' N	86°18'59' W
Midway (MDW)	41°47'10' N	87°45'08' W
O'Hare International (ORD).	41°58'48' N	87°54'16' W
West Chicago-Dupage (DPE).	41°54'52' N	88°14'47' W
<i>Cincinnati, OH:</i> Greater Cincinnati Int'l (CVG).	39°14'59' N	84°23'14' W
Lunken (LUK)	39°06'12' N	84°25'08' W
<i>Cleveland, OH:</i> Burke Lakefront (BKL).	41°31'03' N	81°41'01' W
Cuyahoga County (CGF).	41°33'54' N	81°29'11' W
Hopkins International (CLE).	41°24'38' N	81°50'58' W
<i>Columbus, OH:</i> Port Columbus Int'l (CMH).	39°59'42' N	82°53'11' W
<i>Dallas, TX:</i> Addison (ADS)	32°58'06' N	96°50'10' W
Dallas-Ft. Worth Regional (DFW).	32°53'45' N	97°02'10' W
Dallas-Love Field (DAL).	32°50'49' N	96°51'05' W
Red Bird (RBD)	32°40'49' N	96°52'02' W
<i>Davenport, IA (Rock Island, Moline, IL):</i> Davenport Municipal (DVN).	41°36'42' N	90°35'21' W
Quad City (MLI)	41°26'56' N	90°30'35' W
<i>Dayton, OH:</i> Dayton International (DAY).	39°54'04' N	84°13'12' W
<i>Denver, CO:</i> Centennial (APA)	39°34'19' N	104°50'54' W
Colorado Springs Municipal (COS).	38°48'31' N	104°42'35' W

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City and airport	Reference coordinates		City and airport	Reference coordinates	
	Latitude	Longitude		Latitude	Longitude
Denver-Jeffco (BJC) ..	39°54'28' N	105°26'53' W	Kansas City Municipal	39°07'24' N	94°35'33' W
Stapleton International (DEN).	39°46'22' N	104°52'38' W	Dntrn (MKC).		
<i>Des Moines, IA:</i>			Richard-Gebaur	38°50'37' N	94°33'37' W
Des Moines Municipal (DSM).	41°32'06' N	93°39'38' W	(GBW).		
<i>Detroit, MI:</i>			<i>Kauna Kakai, HI:</i>		
Detroit City (DET)	42°24'33' N	83°00'36' W	Molokai (MKK)	21°09'22' N	157°55'07' W
Detroit Metro-Wayne	42°12'55' N	83°20'55' W	<i>Las Vegas, NV:</i>		
County (DTW).			McCarran Int'l (LAS)	36°04'58' N	115°09'13' W
Oakland-Pontiac	42°39'54' N	83°25'05' W	<i>Lihue, HI:</i>		
(PTK).			Lihue (LIH)	21°58'42' N	159°20'40' W
Willow Run (YIP)	42°14'16' N	83°31'50' W	<i>Los Angeles, CA:</i>		
<i>El Paso, TX:</i>			Burbank-Glendale-	34°21'02' N	118°21'27' W
El Paso International	31°48'24' N	106°22'38' W	Pasadena (BUR).		
(ELP).			Catalina (AVX)	33°24'20' N	118°24'50' W
<i>Flint, MI:</i>			Long Beach-	33°49'03' N	118°09'03' W
Bishop (FNT)	42°57'56' N	83°44'37' W	Daugherty Field		
<i>Ft. Lauderdale-Holly-</i>			(LGB).		
<i>wood, FL:</i>			Los Angeles Int'l	33°56'33' N	118°24'26' W
Ft. Lauderdale Execu-	26°11'49' N	80°10'15' W	(LAX).		
tive (FXE).			Ontario Int'l (ONT)	34°03'22' N	117°36'11' W
Ft. Lauderdale-	26°04'19' N	80°09'13' W	Santa Ana-John	33°40'32' N	117°52'02' W
Hollywd Int'l (FLL).			Wayne-Orange City		
<i>Ft. Worth, TX:</i>			(SNA).		
Meacham (FTW)	32°49'09' N	97°21'41' W	<i>Louisville, KY:</i>		
<i>Fresno, CA:</i>			Standiford Field (SDF)	38°10'40' N	85°44'11' W
Chandler Downtown	36°43'56' N	119°49'08' W	<i>Memphis, TN:</i>		
(FCH).			Memphis Int'l (MEM) ..	35°02'59' N	89°58'43' W
Fresno Air Terminal	36°46'36' N	119°43'02' W	<i>Miami, FLA:</i>		
(FAT).			Miami Int'l (MIA)	25°47'34' N	80°17'26' W
<i>Grand Rapids, MI:</i>			Opa Locka (OPF)	25°54'25' N	80°16'50' W
Kent County Int'l	42°52'57' N	85°31'26' W	Tamiami (TMB)	25°38'51' N	80°25'59' W
(GRR).			<i>Milwaukee, WI:</i>		
<i>Hana, HI:</i>			General Mitchell	42°56'49' N	87°53'49' W
Hana (HNN)	20°47'56' N	156°01'02' W	(MKE).		
<i>Harrisburg, PA:</i>			<i>Minneapolis-St. Paul,</i>		
Capital City (CXY)	40°13'01' N	76°51'06' W	<i>MN:</i>		
Harrisburg Int'l (MDT)	40°11'36' N	76°45'49' W	Minneapolis-St. Paul	44°53'03' N	93°12'54' W
<i>Hartford, CT (Windsor</i>			(MSP).		
<i>Locks):</i>			<i>Mobile, AL:</i>		
Bradley Int'l (BDL)	41°56'20' N	72°41'01' W	Bates Field (MOB)	30°41'23' N	88°14'31' W
Hartford-Brainard	41°44'10' N	72°39'02' W	<i>Nashville, TN:</i>		
(HFD).			Nashville Metropolitan	36°07'37' N	86°40'53' W
<i>Hilo, HI:</i>			(BNA).		
General Lyman Field	19°43'24' N	155°03'05' W	<i>New Haven, CT:</i>		
(ITO).			Tweed-New Haven	41°15'50' N	72°53'15' W
<i>Honolulu, HI:</i>			Municipal (HVN).		
Honolulu International	21°19'20' N	157°55'27' W	<i>New Orleans, LA:</i>		
(HNL).			Lakefort (NEW)	30°02'33' N	90°01'41' W
<i>Houston, TX:</i>			New Orleans Int'l	29°59'34' N	90°15'23' W
W.P. Hobby (HOU)	29°38'43' N	95°16'43' W	(MSY).		
D.W. Hooks Memorial	30°03'50' N	95°33'11' W	<i>Newport News-Hamp-</i>		
(DWH).			<i>ton, VA:</i>		
Houston Interconti-	29°58'55' N	95°20'45' W	Patrick Henry Int'l	37°07'54' N	76°29'36' W
ental (IAH).			(PHF).		
<i>Indianapolis, IN:</i>			<i>New York-Northeast, NJ:</i>		
Indianapolis Int'l (IND)	39°43'32' N	86°17'02' W	Farmingdale Republic	40°43'43' N	73°24'50' W
<i>Jacksonville, FL:</i>			(FRG).		
Craig Municipal (CRG)	30°20'10' N	81°30'53' W	JFK International	40°38'25' N	73°46'42' W
Jacksonville Int'l (JAX)	30°29'33' N	81°41'24' W	(JFK).		
<i>Kahului, HI:</i>			LaGuardia (LGA)	40°46'38' N	73°52'27' W
Kahului (OGG)	20°54'07' N	156°25'59' W	Long Island-McArthur	40°47'44' N	73°06'00' W
<i>Kailua-Kona, HI:</i>			(ISP).		
Ke-Ahole (KOA)	19°44'08' N	156°25'06' W	Morristown Municipal	40°47'57' N	74°24'55' W
<i>Kamehula, HI:</i>			(NJ) (MMU).		
Waimea-Kohala	20°00'16' N	155°40'15' W	Newark Int'l (FWR)	40°41'35' N	74°10'07' W
(MUE).			Teterboro (NJ) (TEB)	40°51'00' N	74°03'41' W
<i>Kansas City, MO-KS:</i>			<i>Norfolk-Portsmouth, VA:</i>		
Fairfax Municipal	39°08'50' N	94°56'14' W	Norfolk Int'l (ORF)	36°53'40' N	76°12'06' W
(KCK).			<i>Oklahoma City, OK:</i>		
Kansas City Int'l (MCI)	39°17'57' N	94°43'04' W	Wiley Post (DWA)	35°32'03' N	97°38'48' W
			Will Rogers World	35°23'35' N	97°36'02' W
			(OKC).		

City and airport	Reference coordinates	
	Latitude	Longitude
<i>Omaha, NE:</i> Eppley Airfield (OMA)	41°18'04' N	95°53'36' W
<i>Orlando, FL:</i> Orlando Executive (ORL)	28°32'43' N	81°19'59' W
Orlando Int'l (MCO) ...	28°25'54' N	81°19'29' W
<i>Philadelphia, PA–NJ:</i> Northeast Philadelphia (PNE)	40°04'55' N	75°00'40' W
Philadelphia Int'l (PHC)	39°52'13' N	75°14'43' W
<i>Phoenix, AZ:</i> Phoenix-Sky Harbor Int'l (PHX)	33°26'10' N	112°00'32' W
Scottsdale Municipal (SDC)	33°37'22' N	111°54'35' W
<i>Pittsburgh, PA:</i> Allegheny County (AGC)	40°21'16' N	79°55'49' W
Greater Pittsburgh Int'l (PIT)	40°29'30' N	80°13'55' W
<i>Portland, OR:</i> Portland-Hillsboro (HIO)	45°32'26' N	122°56'55' W
Portland International (PDX)	45°35'20' N	122°35'47' W
Portland-Troutdale (TTD)	45°32'58' N	122°24'00' W
<i>Providence-Pawtucket, RI—MA:</i> North Central State (SFZ)	41°55'15' N	71°29'30' W
T.F. Green State (PVD)	41°43'31' N	71°25'41' W
<i>Reno, NV:</i> Reno International (RNO)	39°29'52' N	119°46'04' W
<i>Richmond, VA:</i> Byrd International (RIC)	37°30'18' N	77°19'12' W
<i>Rochester, NY:</i> Rochester-Monroe County (ROC)	43°07'08' N	77°40'22' W
<i>Sacramento, CA:</i> Sacramento Executive (SAC)	38°30'45' N	121°29'33' W
Sacramento Metropolitan (SMF)	38°41'44' N	121°36'01' W
<i>St. Louis, MO—IL:</i> Spirit of St. Louis (SUS)	38°39'36' N	90°38'43' W
St. Louis-Lambert Int'l (STC)	38°44'51' N	90°21'39' W
<i>St. Petersburg, FL:</i> Albert Whitted Municipal (SPG)	27°45'53' N	82°37'39' W
Clearwater Int'l (PIE)	27°54'38' N	82°41'16' W
<i>Salt Lake City, UT:</i> Salt Lake City Int'l (SLC)	40°47'13' N	111°58'05' W
<i>San Antonio, TX:</i> San Antonio Int'l (SAT)	29°32'00' N	98°28'10' W
<i>San Bernardino, CA:</i> Ontario Int'l (ONT)	34°03'22' N	117°36'11' W
<i>San Diego, CA:</i> Lindbergh Int'l (SAN)	32°44'01' N	117°11'12' W
<i>San Francisco-Oakland, CA:</i> Metropolitan Oakland Int'l (OAK)	37°43'17' N	122°13'11' W
San Francisco Int'l (SFO)	37°37'08' N	122°22'26' W

City and airport	Reference coordinates	
	Latitude	Longitude
<i>San Jose, CA:</i> San Jose Int'l (SJC) ...	37°21'41' N	121°55'38' W
<i>Scranton, PA:</i> Wilkes-Barre Scranton Int'l (AVP)	41°20'20' N	75°43'27' W
<i>Seattle, WA:</i> King County Int'l (BFI)	47°31'49' N	122°18'03' W
Seattle-Tacoma Int'l (SEA)	47°26'57' N	122°18'29' W
<i>Shreveport, LA:</i> Shreveport Downtown (DTN)	32°32'23' N	93°44'40' W
Shreveport Regional (SHV)	32°26'48' N	93°49'30' W
<i>South Bend, IN:</i> Michiana Regional (SBW)	41°42'18' N	86°18'59' W
<i>Spokane, WA:</i> Grant County (MWH)	47°12'28' N	119°19'08' W
Spokane Int'l (GEG) ..	47°37'12' N	117°31'58' W
<i>Springfield, MA:</i> Barnes Municipal (BAF)	42°09'28' N	72°42'58' W
Westover Field (CEF)	42°11'52' N	72°31'50' W
<i>Syracuse, NY:</i> Syracuse-Hancock Int'l (SYR)	43°06'44' N	76°06'32' W
<i>Tacoma, WA:</i> Tacoma Narrows (TIW)	47°16'05' N	122°34'37' W
<i>Tampa, FL:</i> Tampa Int'l (TPA)	27°58'31' N	82°32'00' W
<i>Toledo, OH:</i> Toledo Express (TOL)	41°35'15' N	83°48'19' W
<i>Trenton, NJ—PA:</i> Mercer County (TTN)	40°16'38' N	74°48'50' W
<i>Tucson, AZ:</i> Tucson Int'l (TUS)	32°07'06' N	110°56'35' W
<i>Tulsa, OK:</i> R.L. Jones, Jr. (RVS)	36°02'18' N	95°59'05' W
Tulsa Int'l (TUL)	36°11'54' N	95°53'16' W
<i>Washington, DC:</i> Dulles International (IAD)	38°56'39' N	77°27'26' W
National (DCA)	38°51'07' N	77°02'17' W
<i>Wichita, KS:</i> Mid-Continent (ICT) ...	37°39'00' N	97°25'58' W
<i>Wilkes-Barre, PA:</i> Wilkes-Barre-Scranton (AVP)	41°20'20' N	75°43'27' W
<i>Wilmington, DE:</i> Gr. Wilm.-New Castle City (ILG)	39°40'42' N	75°36'25' W
<i>Worcester, MA:</i> Worcester Municipal (ORH)	42°16'02' N	71°52'34' W
<i>Youngstown-Warren, OH—PA:</i> Youngstown Municipal (YNG)	41°15'32' N	80°40'34' W

(26) This frequency may be assigned to fixed stations in the Business Radio Service in accordance with the provisions of § 90.261.

(27) Within the boundaries of urbanized areas of 200,000 or more population, defined in the United States Census of Population, 1960, vol. 1, table 23, page 1–50, this frequency may be

used only by persons rendering a central station commercial protection service within the service area of the radio station utilizing the frequency and may be used only for communications pertaining to safety of life and property, and for maintenance or testing of the protection facilities. Central Station commercial protection service is defined as an electrical protection and supervisory service rendered to the public from and by a central station accepted and certified by one or more of the recognized rating agencies, or the Underwriters Laboratories' (UL), or Factory Mutual System. Other stations in the Business Radio Service may be licensed on this frequency only when all base, mobile relay and control stations are located at least 120 km (75 miles) from the city center or centers of the specified urbanized areas of 200,000 or more population. With respect to combination urbanized areas containing more than one city, 120 km (75 mile) separation shall be maintained from each city center which is included in the urbanized area. The locations of centers of cities are determined from appendix, page 226, of the U.S. Commerce publication "Air Line Distance Between Cities in the United States."

(28) This frequency may be assigned only to persons rendering a central station commercial protection service, which is defined at § 90.75(c)(27), within the service area of the radio station utilizing the frequency.

(29) This frequency will be assigned only to stations whose control point location is within 805 m (½ mi. direct) of the transmitter location. Maximum power output may not exceed 110 watts, and the overall height of the antenna above ground may not exceed 30 m (100 ft.).

(30) Operation on this frequency is limited to a maximum output power of 35 watts.

(31) Maximum permissible power output for stations on airports is 3 watts. Each station authorized on this frequency will be classified and licensed as a mobile station. Any units of such a station, however, may provide the functions of a base station on a secondary basis to mobile service operations provided that the vertical separation

between the control point or ground level and the center of the radiating portion of the antenna of any units so used shall not exceed 8 m (25 ft.).

(32) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(33) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(34) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(35) The maximum output power of the transmitter may not exceed 1 watt. A1D, A2D, F1D, or F2D emission may be authorized.

(36) The maximum effective radiated power (ERP) may not exceed 2 watts. All operation is on a secondary basis to adjacent channel land mobile operations. All stations will be licensed as a mobile, however, such stations may be used to provide the operational functions of a base or fixed station. When performing such functions, the height of the antenna system may not exceed 15.24 m (50 feet) above ground.

(37) Use of this frequency is limited to stations located at least 120.7 km (75 miles) from the center of any urbanized area of 200,000 or more population (U.S. Census or Population 1970). Operation is on a secondary basis to that in the Power radio Service.

(38) [Reserved]

(39) Persons who render a central station commercial protection service are authorized to operate fixed stations on this frequency for the transmission of tone or impulse signals on a secondary, noninterference base-to-base/mobile operations subject to the following conditions and limitations.

(i) Secondary fixed operations may be used only for the following purposes.

(A) Indication of equipment malfunction.

(B) Actuation of a device to indicate the presence of an intruder, fire, or other hazardous condition on the property under the protection of the licensee.

(C) Indication of an abnormal condition in facilities under the protection of the licensee that, if not promptly reported, would result in danger to human life.

(D) Transmission, as may be necessary, to verify status of equipment; adjust operating conditions; or correct any abnormal condition.

(E) Confirmation of status, or that an operation or correction has been accomplished.

(ii) The maximum duration of any one nonvoice signal may not exceed 2 seconds and shall not be transmitted more than three times.

(iii) Systems employing automatic interrogation shall be limited to nonvoice techniques and shall not be activated for this purpose more than 10 seconds out of any 60-second period. This 10-second frame includes both transmit and response times.

(iv) The bandwidth shall not exceed that authorized to the licensee for the primary operation on the frequency concerned.

(v) Frequency loading resulting from the use of secondary signaling will not be considered in whole or in part as a justification for authorizing additional frequencies in the licensee's mobile system.

(vi) A mobile service frequency may not be used exclusively for secondary signaling.

(vii) The output power shall not exceed 30 watts (at the remote site).

(viii) A1D, A2D, F1D, or F2D emission may be authorized.

(ix) The transmitter shall be designed to deactivate automatically after 3 minutes of continuous carrier radiation.

(x) Operational fixed stations authorized under this paragraph are exempt from the requirements of §§90.137(b), 90.429(d), 90.425 and 90.433.

(xi) On these frequencies, base, mobile relay or mobile stations may transmit secondary tone or impulse signals to receivers, as provided in this section.

(40) Licensees providing a central station commercial protection service may communicate with police or fire stations, or vehicles, on this frequency, and may install licensed transmitting units which operate on this frequency at police or fire stations, or in police or fire vehicles, if the frequency's primary use is in a base/mobile system for a central station commercial protection service.

(41) Stations authorized on this frequency prior to September 26, 1984 will continue to be authorized as licensed on their existing authorization.

(42) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(43) Frequencies in this band are available on a shared basis with stations in other services, and subject to no protection from interference caused by the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications will be accepted for new stations. Stations in the 2483.5–2500 MHz band that were licensed as a result of applications filed on or before July 25, 1985, are grandfathered, and their operation is co-primary with the Radiodetermination Satellite Service.

(44) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(45) This frequency is available on a shared basis with the Power, Petroleum, Manufacturers, and Railroad Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries or confines of the licensee's business premises. Operations on this frequency are subject to the provisions of §90.257(b). Pulsed modulations will not be authorized.

(46) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(47) This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz.

(48) Assignment of frequencies in this band are subject to the provisions of §90.173.

(49) This frequency will be authorized a channel bandwidth of 25 kHz.

(50) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(51) Operation on this frequency is limited to a maximum output power of 1 watt; and each station authorized

will be classified and licensed as a mobile station. Any units of such a station, however, may provide the operational functions of a base or fixed station on a secondary basis to mobile service operations. Provided, That the separation between the control point and the center of the radiating portion of the antenna of any units so used does not exceed 8 m (25 ft).

(52) Use of this frequency is on a secondary basis and subject to the provisions of § 90.267 (a)(3), (a)(4), (a)(5), and (a)(7).

(53) This frequency may be used on a secondary, non-interference basis by a hospital or health care institution holding a license to operate a radio station under this part to operate a medical radio telemetry device with an output power not to exceed 20 milliwatts without specific authorization from the Commission.

(54) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(55) One-way paging transmitters on this frequency may operate with an output power of 350 watts.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service. (See also § 90.253.)

(1) [Reserved]

(2) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new station will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(3) Licensees holding a valid authorization on January 1, 1973, to operate on the frequencies 406.025, 406.075 MHz may continue to be authorized for such operations until the expiration of their present license on a secondary basis to stations operating in accordance with the table in § 2.106 of this chapter.

(4) Low power mobile stations of 100 mw or less output power used for one-way, non-voice medical telemetry operations in hospitals or in medical convalescent centers are subject to the provisions of § 90.238.

(5) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247, notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz and 37.00–37.01 MHz are available for assignment to applicants in this service subject to the provisions of subpart Q.

(3) Frequencies in the 457 and 467 MHz bands may be assigned collectively as provided by paragraph (c)(23) of this section notwithstanding this limitation.

(4) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(f) *Limitation on itinerant operation.* Base or mobile stations being utilized in itinerant operation will be authorized only on base or mobile frequencies designated for itinerant operation under § 90.75(c)(3), or on other frequencies not designated for permanent use.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.75, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.79 Manufacturers Radio Service.

(a) *Eligibility.* Persons primarily engaged in any of the following manufacturing activities are eligible to hold authorizations in the Manufacturers Radio Service to operate radio stations for transmission of communications essential to such activities of the licensee:

(1) The mechanical or chemical transformation of substances into new products within such establishments as plants, factories, shipyards, or mills which employ, in that process, powerdriven machines and materials-handling equipment.

(2) The assembly of components of manufactured products within such establishments as plants, factories, shipyards, or mills where the new product is neither a new structure nor other fixed improvement. Establishments primarily engaged in the wholesale or retail trade, or in service activities, even though they fabricate or assemble any or all the products or commodities handled, are not eligible in this service.

(3) The providing of supporting services or materials by a corporation to its parent corporation, to another subsidiary of its parent or to its own subsidiary, where such supporting services or materials are directly related to those regular activities of such parent or subsidiary which constitute the basis for eligibility in this service.

(b) *Special limitations on use.* The following limitations are applicable to the use of stations in this service:

(1) Authorized stations may be used only for the transmission of communications related to the operation of the plant, such as for security, production control or materials-handling. Communications related to the retail distribution of the licensee's products are not permitted.

(2) Base station will only be authorized in this service for operation at specified and permanent locations.

(c) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Manufacturers Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which

are explained in paragraph (d) of this section:

MANUFACTURERS RADIO SERVICE FREQUENCY
TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
72–76	Operational fixed	25
72.02	Mobile	1, 2
72.04 .....	.....do	1, 2
72.06 .....	.....do	1, 2
72.08 .....	.....do	1, 2, 3
72.10 .....	.....do	1, 2
72.12 .....	.....do	1, 2
72.14 .....	.....do	1, 2
72.16 .....	.....do	1, 2, 3
72.18 .....	.....do	1, 2
72.20 .....	.....do	1, 2
72.22 .....	.....do	1, 2
72.24 .....	.....do	1, 2, 3
72.26 .....	.....do	1, 2
72.28 .....	.....do	1, 2
72.30 .....	.....do	1, 2
72.32 .....	.....do	1, 2, 3
72.34 .....	.....do	1, 2
72.36 .....	.....do	1, 2
72.38 .....	.....do	1, 2
72.40 .....	.....do	1, 2, 3
72.44 .....	.....do	2, 4
72.48 .....	.....do	2, 4
72.52 .....	.....do	2, 4
72.56 .....	.....do	2, 4
72.60 .....	.....do	2, 4
74.61 .....	.....do	28
74.63 .....	.....do	28
74.65 .....	.....do	28
74.67 .....	.....do	28
74.69 .....	.....do	28
74.71 .....	.....do	28
74.73 .....	.....do	28
74.75 .....	.....do	28
74.77 .....	.....do	28
74.79 .....	.....do	28
75.21 .....	.....do	28
75.23 .....	.....do	28
75.25 .....	.....do	28
75.27 .....	.....do	28
75.29 .....	.....do	28
75.31 .....	.....do	28
75.33 .....	.....do	28
75.35 .....	.....do	28
75.37 .....	.....do	28
75.39 .....	.....do	28
75.44 .....	.....do	2, 4
75.48 .....	.....do	2, 4
75.52 .....	.....do	2, 4
75.56 .....	.....do	2, 4
75.60 .....	.....do	2, 4
150 to 170	Base or mobile	30, 32
153.050 .....	.....do	5, 21, 22
153.0575 .....	.....do	5, 21, 22,
		23
153.065 .....	.....do	5
153.0725 .....	.....do	5, 23
153.080 .....	.....do	5
153.0875 .....	.....do	5, 23
153.095 .....	.....do	5
153.1025do	5, 23
153.110do	5
153.1175do	5, 23
153.125do	5, 21, 22
153.1325do	5, 21, 22,
		23

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MANUFACTURERS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
153.140 .....	.....do	5
153.1475 .....	.....do	5, 23
153.155 .....	.....do	5
153.1625 .....	.....do	5, 23
153.170 .....	.....do	5
153.1775 .....	.....do	5, 23
153.185 .....	.....do	5
153.1925 .....	.....do	5, 23
153.200 .....	.....do	5
153.2075 .....	.....do	5, 23
153.215 .....	.....do	5
153.2225 .....	.....do	5, 23
153.230 .....	.....do	5
153.2375 .....	.....do	5, 23
153.245 .....	.....do	5
153.2525 .....	.....do	5, 23
153.260 .....	.....do	5
153.2675 .....	.....do	5, 23
153.275 .....	.....do	5
153.2825 .....	.....do	5, 23
153.290 .....	.....do	5
153.2975 .....	.....do	5, 23
153.305 .....	.....do	5
153.3125 .....	.....do	5, 23
153.320 .....	.....do	5
153.3275 .....	.....do	5, 23
153.335 .....	.....do	5, 21
153.3425 .....	.....do	5, 21, 23
153.350 .....	.....do	5, 21
153.3575 .....	.....do	5, 21, 23
153.365 .....	.....do	5, 21
153.3725 .....	.....do	5, 21, 23
153.380 .....	.....do	5, 21
153.3875 .....	.....do	5, 21, 23
153.395 .....	.....do	5, 21
153.4025 .....	.....do	5, 21, 23
154.45625	Fixed or mobile	6, 9, 10, 19
154.46375 .....	.....do	6, 7, 9, 10, 20
154.47125 .....	.....do	6, 7, 9, 10
154.47875 .....	.....do	6, 9, 10, 19
158.280	Base or mobile	5
158.2875 .....	.....do	5, 23
158.295 .....	.....do	5
158.3025 .....	.....do	5, 23
158.310 .....	.....do	5
158.3175 .....	.....do	5, 23
158.325 .....	.....do	5, 21, 22
158.3325 .....	.....do	5, 21, 22, 23
158.415 .....	.....do	5, 21, 22
158.4225 .....	.....do	5, 21, 22, 23
158.430 .....	.....do	5
158.4375 .....	.....do	5, 23
169–172	Mobile	26
173.20375	Fixed or mobile	6, 7, 9, 10
173.2100 .....	.....do	7, 8, 9, 10
173.2375 .....	.....do	6, 9, 10, 19
173.2625 .....	.....do	6, 9, 10, 19
173.2875 .....	.....do	6, 9, 10, 19
173.3125 .....	.....do	6, 9, 10, 19
173.3375 .....	.....do	6, 9, 10, 19
173.3625 .....	.....do	6, 9, 10, 19

MANUFACTURERS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
173.3900 .....	.....do	7, 8, 9, 10
173.39625 .....	.....do	6, 7, 9, 10
216–220	Base or mobile	11
220–222	Base and mobile	27
450–470	Fixed, base, or mobile	12, 30
451.1625	Mobile	31
451.175	Base or mobile	13
451.18125 .....	.....do	13, 29
451.18750 .....	.....do	13, 23
451.19375 .....	.....do	13, 29
451.2125	Mobile	31
451.225	Base or mobile	13
451.23125 .....	.....do	13, 29
451.23750 .....	.....do	13, 23
451.24375 .....	.....do	13, 29
451.2625	Mobile	31
451.275	Base or mobile	13
451.28125 .....	.....do	13, 29
451.28750 .....	.....do	13, 23
451.29375 .....	.....do	13, 29
451.3625	Mobile	31
451.375	Base or mobile	13
451.38125 .....	.....do	13, 29
451.38750 .....	.....do	13, 23
451.39375 .....	.....do	13, 29
451.4125	Mobile	31
451.425	Base or mobile	13
451.43125 .....	.....do	13, 29
451.43750 .....	.....do	13, 23
451.44375 .....	.....do	13, 29
451.4625	Mobile	31
451.475	Base or mobile	13
451.48125 .....	.....do	13, 29
451.48750 .....	.....do	13, 23
451.49375 .....	.....do	13, 29
451.5125	Mobile	31
451.525	Base or mobile	13
451.53125 .....	.....do	13, 29
451.53750 .....	.....do	13, 23
451.54375 .....	.....do	13, 29
451.5625	Mobile	31
451.575	Base or mobile	13
451.58125 .....	.....do	13, 29
451.58750 .....	.....do	13, 23
451.59375 .....	.....do	13, 29
451.6125	Mobile	31
451.625	Base or mobile	13
451.63125 .....	.....do	13, 29
451.63750 .....	.....do	13, 23
451.64375 .....	.....do	13, 29
451.6625	Mobile	31
451.675	Base or mobile	13
451.68125 .....	.....do	13, 29
451.68750 .....	.....do	13, 23
451.69375 .....	.....do	13, 29
456.1625	Mobile	31
456.175 .....	.....do	13
456.18125 .....	.....do	13, 29
456.18750 .....	.....do	13, 23
456.19375 .....	.....do	13, 29
456.2125 .....	.....do	31
456.225 .....	.....do	13
456.23125 .....	.....do	13, 29
456.23750 .....	.....do	13, 23
456.24375 .....	.....do	13, 29
456.2625 .....	.....do	31
456.275 .....	.....do	13
456.28125 .....	.....do	13, 29
456.28750 .....	.....do	13, 23
456.29375 .....	.....do	13, 29
456.3625 .....	.....do	31

MANUFACTURERS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
456.375 .....	.....do	13
456.38125 .....	.....do	13, 29
456.38750 .....	.....do	13, 23
456.39375 .....	.....do	13, 29
456.4125 .....	.....do	31
456.425 .....	.....do	13
456.43125 .....	.....do	13, 29
456.43750 .....	.....do	13, 23
456.44375 .....	.....do	13, 29
456.4625 .....	.....do	31
456.475 .....	.....do	13
456.48125 .....	.....do	13, 29
456.48750 .....	.....do	13, 23
456.49375 .....	.....do	13, 29
456.5125 .....	.....do	31
456.525 .....	.....do	13
456.53125 .....	.....do	13, 29
456.53750 .....	.....do	13, 23
456.54375 .....	.....do	13, 29
456.5625 .....	.....do	31
456.575 .....	.....do	13
456.58125 .....	.....do	13, 29
456.58750 .....	.....do	13, 23
456.59375 .....	.....do	13, 29
456.6125 .....	.....do	31
456.625 .....	.....do	13
456.63125 .....	.....do	13, 29
456.63750 .....	.....do	13, 23
456.64375 .....	.....do	13, 29
456.6625 .....	.....do	31
456.675 .....	.....do	13
456.68125 .....	.....do	13, 29
456.68750 .....	.....do	13, 23
456.69375 .....	.....do	13, 29
462.1875 .....	.....do	31
462.200	Base or mobile .....	.....
462.20625 .....	.....do	29
462.21250 .....	.....do	23
462.21875 .....	.....do	29
462.225 .....	.....do .....	.....
462.23125 .....	.....do	29
462.23750 .....	.....do	23
462.24375 .....	.....do	29
462.250 .....	.....do .....	.....
462.25625 .....	.....do	29
462.26250 .....	.....do	23
462.26875 .....	.....do	29
462.275 .....	.....do .....	.....
462.28125 .....	.....do	29
462.28750 .....	.....do	23
462.29375 .....	.....do	29
462.300 .....	.....do .....	.....
462.30625 .....	.....do	29
462.31250 .....	.....do	23
462.31875 .....	.....do	29
462.325 .....	.....do .....	.....
462.33125 .....	.....do	29
462.33750 .....	.....do	23
462.34375 .....	.....do	29
462.350 .....	.....do .....	.....
462.35625 .....	.....do	29
462.36250 .....	.....do	23
462.36875 .....	.....do	29
462.375 .....	.....do .....	.....
462.38125 .....	.....do	29
462.38750 .....	.....do	23
462.39375 .....	.....do	29
462.400 .....	.....do .....	.....
462.40625 .....	.....do	29
462.41250 .....	.....do	23
462.41875 .....	.....do	29

MANUFACTURERS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
462.425 .....	.....do .....	.....
462.43125 .....	.....do	29
462.43750 .....	.....do	23
462.44375 .....	.....do	29
462.450 .....	.....do .....	.....
462.45625 .....	.....do	29
462.46250 .....	.....do	23
462.46875 .....	.....do	29
462.475 .....	.....do	13
462.48125 .....	.....do	13, 29
462.48750 .....	.....do	13, 23
462.49375 .....	.....do	13, 29
462.500 .....	.....do .....	.....
462.50625 .....	.....do	29
462.51250 .....	.....do	23
462.51875 .....	.....do	29
462.525 .....	.....do	13
462.53125 .....	.....do	13, 29, 29
467.1875	Mobile	31
467.200 .....	.....do .....	.....
467.20625 .....	.....do	29
467.21250 .....	.....do	23
467.21875 .....	.....do	29
467.225 .....	.....do .....	.....
467.23125 .....	.....do	29
467.23750 .....	.....do	23
467.24375 .....	.....do	29
467.250 .....	.....do .....	.....
467.25625 .....	.....do	29
467.26250 .....	.....do	23
467.26875 .....	.....do	29
467.275 .....	.....do .....	.....
467.28125 .....	.....do	29
467.28750 .....	.....do	23
467.29375 .....	.....do	29
467.300 .....	.....do .....	.....
467.30625 .....	.....do	29
467.31250 .....	.....do	23
467.31875 .....	.....do	29
467.325 .....	.....do .....	.....
467.33125 .....	.....do	29
467.33750 .....	.....do	23
467.34375 .....	.....do	29
467.350 .....	.....do .....	.....
467.35625 .....	.....do	29
467.36250 .....	.....do	23
467.36875 .....	.....do	29
467.375 .....	.....do .....	.....
467.38125 .....	.....do	29
467.38750 .....	.....do	23
467.39375 .....	.....do	29
467.400 .....	.....do .....	.....
467.40625 .....	.....do	29
467.41250 .....	.....do	23
467.41875 .....	.....do	29
467.425 .....	.....do .....	.....
467.43125 .....	.....do	29
467.43750 .....	.....do	23
467.44375 .....	.....do	29
467.450 .....	.....do .....	.....
467.45625 .....	.....do	29
467.46250 .....	.....do	23
467.46875 .....	.....do	29
467.475 .....	.....do	13
467.48125 .....	.....do	13, 29
467.48750 .....	.....do	13, 23
467.49375 .....	.....do	13, 29
467.500 .....	.....do .....	.....
467.50625 .....	.....do	29
467.51250 .....	.....do	23
467.51875 .....	.....do	29

MANUFACTURERS RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
467.525 .....	.....do	13
467.53125 .....	.....do	13, 29
470 to 512	Base or mobile	14
806 to 821	Mobile	15
851 to 866	Base or mobile	15
896 to 901	Mobile	15
928 and above	Operational fixed	16
929 to 930	Base only	24
935 to 940	Base or mobile	15
1427 to 1435	Operational fixed, base or mobile.	1
2450 to 2500	Base or mobile	17
8400 to 8500 .....	.....do	18
10,550 to 10,680* .....	.....do	

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(d) Explanation of assignment limitations appearing in the frequency tabulation of paragraph (c) of this section:

(1) This frequency is shared with fixed stations in other services and is subject to no protection from interference.

(2) All communications on this frequency must be conducted within the boundaries or confines of plant, factory, shipyards, mill, or other manufacturing area. All operations on this frequency are subject to the provisions of § 90.257(b).

(3) This frequency is shared with the Radio Control (R/C) Service, part of the Personal Radio Services, where it is used solely for the radio control of models.

(4) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, and Fire Radio Services and interservice coordination is required. All communications must be within the boundaries or confines of plants, mills, yards, or other manufacturing areas. All operations on this frequency are subject to the provisions of § 90.257(b).

(5) This frequency is shared with the Forest Products and Petroleum Radio Services. The output power of transmitters operating on this frequency shall not exceed 110 watts.

(6) For FM transmitters the sum of the highest modulating frequency in hertz and the amount of frequency deviation or swing in hertz may not ex-

ceed 2800 Hz and the maximum frequency deviation may not exceed 2.5 kHz. For AM transmitters the highest modulating frequency may not exceed 2000 Hz. The carrier frequency must be maintained within 0.0005 percent of the center of the frequency band, and the authorized bandwidth may not exceed 6 kHz.

(7) On this frequency band the maximum power output of the transmitter may not exceed 50 watts for fixed stations and 1 watt for mobile stations. A1B, A2D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B or G2D emission may be authorized, and mobile stations used to control remote objects and devices may be operated in the continuous transmit mode.

(8) For FM transmitters the sum of the highest modulating frequency in hertz and the amount of frequency deviation or swing in hertz may not exceed 1700 Hz and the maximum deviation may not exceed 1.2 kHz. For AM transmitters the highest modulating frequency may not exceed 1200 Hz. The carrier frequency must be maintained within 0.0005 percent of the center of the frequency band, and the authorized bandwidth may not exceed 3 kHz.

(9) This frequency is available on a shared basis with other Industrial Radio Services as follows: Power, Forest Products, Special Industrial, Petroleum, Business, and the Local Government Radio Service and may be used in this service only for the purpose of remote control and telemetering.

(10) Operational fixed stations must employ directional antennas having a front-to-back ratio of at least 20 db. Omnidirectional antennas having unity gains may be employed for stations communicating with at least three receiving locations separated by 160° of azimuth.

(11) This frequency band is available to stations in this service subject to the provisions of § 90.259.

(12) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(13) This frequency is available on a shared basis in the Power, Petroleum, Forest Products, Manufacturers, and Telephone Maintenance Radio Services. It may be assigned only when all of the frequencies in the 450–470 MHz

band allocated to the service in which the applicant is primarily eligible are assigned within 56 km. (35 mi) of the proposed base station.

(14) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(15) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(16) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(17) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(18) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(19) The maximum effective radiated power (ERP) may not exceed 20 watts for fixed stations and 2 watts for mobile stations and the height of the antenna system may not exceed 15.24 meters (50 feet) above ground. All such operation is on a secondary basis to adjacent channel land mobile operations.

(20) Use of this frequency is limited to stations located at least 120.7 km (75 miles) from the center of any urbanized area of 200,000 or more population (U.S. Census of Population, 1970). Operation is on a second any basis to that in the Power Radio Service.

(21) This frequency is shared with the Special Industrial Radio Service in the States of North Dakota; South Dakota; Iowa; Nebraska; Kansas and Missouri beyond 80 km (50 miles) from St. Louis and Kansas City; Colorado and Wyoming east of Longitude 106 degrees; and Minnesota south of Latitude 47 degrees.

(22) This frequency may not be shared in the Special Industrial Radio Service within 32 km (20 miles) of the

cities of Duluth, Minnesota; Des Moines and Davenport, Iowa; Omaha, Nebraska; Colorado Springs, Colorado; and Wichita, Kansas.

(23) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(24) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(25) The frequencies available for use at operational-fixed stations in the band 72–76 MHz are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(26) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(27) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(28) This frequency is available on a shared basis in the Power, Petroleum, Business, and Railroad Radio Services and interservice coordination is required. All communications on this frequency must be conducted within the boundaries or confines of a plant, factory, shipyard, mill, or other manufacturing area. All operations on this frequency are subject to the provisions of §90.257(b). Pulsed modulations will not be authorized.

(29) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(30) Assignment of frequencies in this band are subject to the provisions of §90.173.

(31) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(32) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a

secondary, non-interference basis after August 1, 2003.

(e) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service: (See also §90.253.)

(1) Frequencies may be substituted for those available below 25 MHz in accordance with the provisions of §90.263.

(2) [Reserved]

(3) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(4) Frequencies in the 421–430, MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§90.273 through 90.281.

(f) *Limitation on number of frequencies assignable.* Normally only one frequency or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with §90.247 notwithstanding this limitation.

(2) Frequencies in the ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for assignment to applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.79, see the List of CFR

Sections Affected in the Finding Aids section of this volume.

§90.81 Telephone Maintenance Radio Service.

(a) *Eligibility.* Communications common carriers engaged in the provision of landline local exchange telephone service, or interexchange communications service, or who provide wire-telegraph service, and radio communications common carriers authorized in the Point-to-Point Microwave Radio Service under part 21 of this chapter are eligible to hold authorizations in the Telephone Maintenance Radio Service. Resellers that do not own or control transmission facilities are not eligible in this service.

(b) *Special limitations on use.* The facilities authorized in this service shall only be used for transmission of communications directly related to the construction, repair, maintenance or operation of communications common carrier facilities. The facilities authorized in this service shall not be used for the transmission of any common carrier or public correspondence communication.

(c) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Telephone Maintenance Radio Service, together with the class of station(s) to which they are normally assigned and the specific assignment limitations which are explained in paragraph (d) of this section:

TELEPHONE MAINTENANCE RADIO SERVICE
FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Kilohertz		
2,000 to 25,000	Fixed, base or mobile	14
Megahertz		
35.16	Base or mobile .....	.....
43.16	Mobile .....	.....
72–76	Operational fixed	13
150 to 170	Base or mobile	17, 19
151.985	Base or mobile .....	.....
152.9925 .....	.....do	16
158.34	Mobile .....	.....
158.3475 .....	.....do	11
169–172 .....	.....do	15
216 to 220	Base or mobile	2
220–222	Base and mobile	1
450 to 470	Fixed, base, or mobile	3, 17
451.1625	Mobile	18

TELEPHONE MAINTENANCE RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
451.175	Base or mobile	4
451.18125 .....	.....do	4, 16
451.18750 .....	.....do	4, 11
451.19375 .....	.....do	4, 16
451.2125	Mobile	18
451.225	Base or mobile	4
451.23125 .....	.....do	4, 16
451.23750 .....	.....do	4, 11
451.24375 .....	.....do	4, 16
451.2625	Mobile	18
451.275	Base or mobile	4
451.28125 .....	.....do	4, 16
451.28750 .....	.....do	4, 11
451.29375 .....	.....do	4, 16
451.300 .....	.....do	5
451.30625 .....	.....do	5, 16
451.31250 .....	.....do	5, 11
451.31875 .....	.....do	5, 16
451.325 .....	.....do	5
451.33125 .....	.....do	5, 16
451.33750 .....	.....do	5, 11
451.34375 .....	.....do	5, 16
451.350 .....	.....do	5
451.35625 .....	.....do	5, 16
451.36250 .....	.....do	5, 11
451.36875 .....	.....do	5, 16
451.375 .....	.....do	4
451.38125 .....	.....do	4, 16
451.38750 .....	.....do	4, 11
451.39375 .....	.....do	4, 16
451.400 .....	.....do	5
451.40625 .....	.....do	5, 16
451.41250 .....	.....do	5, 11
451.41875 .....	.....do	5, 16
451.425 .....	.....do	4
451.43125 .....	.....do	4, 16
451.43750 .....	.....do	4, 11
451.44375 .....	.....do	4, 16
451.450 .....	.....do	5
451.45625 .....	.....do	5, 16
451.46250 .....	.....do	5, 11
451.46875 .....	.....do	5, 16
451.475 .....	.....do	4
451.48125 .....	.....do	4, 16
451.48750 .....	.....do	4, 11
451.49375 .....	.....do	4, 16
451.500 .....	.....do	5
451.50625 .....	.....do	5, 16
451.51250 .....	.....do	5, 11
451.51875 .....	.....do	5, 16
451.525 .....	.....do	4
451.53125 .....	.....do	4, 16
451.53750 .....	.....do	4, 11
451.54375 .....	.....do	4, 16
451.5625	Mobile	18
451.575	Base or mobile	4
451.58125 .....	.....do	4, 16
451.58750 .....	.....do	4, 11
451.59375 .....	.....do	4, 16
451.6125	Mobile	18
451.625	Base or mobile	4
451.63125 .....	.....do	4, 16
451.63750 .....	.....do	4, 11
451.64375 .....	.....do	4, 16
451.6625	Mobile	18
451.675	Base or mobile	4
451.68125 .....	.....do	4, 16
451.68750 .....	.....do	4, 11
451.69375 .....	.....do	4, 16
456.1625	Mobile	18

TELEPHONE MAINTENANCE RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
456.175 .....	.....do	4
456.18125 .....	.....do	4, 16
456.18750 .....	.....do	4, 11
456.19375 .....	.....do	4, 16
456.2125 .....	.....do	18
456.225 .....	.....do	4
456.23125 .....	.....do	4, 16
456.23750 .....	.....do	4, 11
456.24375 .....	.....do	4, 16
456.2625 .....	.....do	18
456.275 .....	.....do	4
456.28125 .....	.....do	4, 16
456.28750 .....	.....do	4, 11
456.29375 .....	.....do	4, 16
456.300 .....	.....do	5
456.30625 .....	.....do	5, 16
456.31250 .....	.....do	5, 11
456.31875 .....	.....do	5, 16
456.325 .....	.....do	5
456.33125 .....	.....do	5, 16
456.33750 .....	.....do	5, 11
456.34375 .....	.....do	5, 16
456.350 .....	.....do	5
456.35625 .....	.....do	5, 16
456.36250 .....	.....do	5, 11
456.36875 .....	.....do	5, 16
456.375 .....	.....do	4
456.38125 .....	.....do	4, 16
456.38750 .....	.....do	4, 11
456.39375 .....	.....do	4, 16
456.400 .....	.....do	5
456.40625 .....	.....do	5, 16
456.41250 .....	.....do	5, 11
456.41875 .....	.....do	5, 16
456.425 .....	.....do	4
456.43125 .....	.....do	4, 16
456.43750 .....	.....do	4, 11
456.44375 .....	.....do	4, 16
456.450 .....	.....do	5
456.45625 .....	.....do	5, 16
456.46250 .....	.....do	5, 11
456.46875 .....	.....do	5, 16
456.475 .....	.....do	4
456.48125 .....	.....do	4, 16
456.48750 .....	.....do	4, 11
456.49375 .....	.....do	4, 16
456.500 .....	.....do	5
456.50625 .....	.....do	5, 16
456.51250 .....	.....do	5, 11
456.51875 .....	.....do	5, 16
456.525 .....	.....do	4
456.53125 .....	.....do	4, 16
456.53750 .....	.....do	4, 11
456.54375 .....	.....do	4, 16
456.5625 .....	.....do	18
456.575 .....	.....do	4
456.58125 .....	.....do	4, 16
456.58750 .....	.....do	4, 11
456.59375 .....	.....do	4, 16
456.6125 .....	.....do	18
456.625 .....	.....do	4
456.63125 .....	.....do	4, 16
456.63750 .....	.....do	4, 11
456.64375 .....	.....do	4, 16
456.6625 .....	.....do	18
456.675 .....	.....do	4
456.68125 .....	.....do	4, 16
456.68750 .....	.....do	4, 11
456.69375 .....	.....do	4, 16
462.4625 .....	.....do	18

TELEPHONE MAINTENANCE RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
462.475	Base or mobile	4
462.48125 .....	.....do	4, 16
462.48750 .....	.....do	4, 11
462.49375 .....	.....do	4, 16
462.5125	Mobile	18
462.525	Base or mobile	4
462.53125 .....	.....do	4, 16
467.4625	Mobile	18
467.475 .....	.....do	4
467.48125 .....	.....do	4, 16
467.48750 .....	.....do	4, 11
467.49375 .....	.....do	4, 16
467.5125 .....	.....do	18
467.525 .....	.....do	4
467.53125 .....	.....do	4, 16
470 to 512	Base or mobile	6
806 to 821	Mobile	7
851 to 866	Base or mobile	7
896 to 901	Mobile	7
928 and above	Operational fixed	8
929–930	Base only	12
935 to 940	Base or mobile	7
1427 to 1435	Operational fixed, base or mobile	2
2450 to 2500	Base or mobile	9
8400 to 8500 .....	.....do	10
10,550 to 10,680* .....	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(d) Explanation of assignment limitations appearing in the frequency table of paragraph (c) of this section:

(1) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(2) This frequency band is available to stations in this service subject to the provisions of § 90.259.

(3) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(4) This frequency is available on a shared basis in the Power, Petroleum, Forest Products, Manufacturers, and Telephone Maintenance Radio Services. It may be assigned only when all of the base and mobile frequencies in the 450–470 MHz band for which the applicant is primarily eligible are assigned within 56 km (35 miles) of the proposed base station. Applications for this frequency must be coordinated with all five services. Telephone Maintenance Radio Service licensees on this frequency authorized prior to September 26, 1986, including their successors or assignees in business, will be permitted to renew their authorizations

indefinitely, increase the number of transmitters operated, and expand the geographic coverage area of their systems, without a showing that all of the base and mobile Telephone Maintenance Radio Service frequencies in this band are assigned within 56 km (35 miles) of the existing base station.

(5) This frequency may be assigned to auxiliary test stations.

(6) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(7) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(8) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(9) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(10) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(11) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(12) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(13) The frequencies available for use at operational-fixed stations in the band 72–76 MHz are listed in § 90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of § 90.257.

(14) Only entities engaged in the repair of telecommunications circuits are eligible to use this spectrum, and

then only in accordance with § 90.266. Except as provided in this part, licensees may not use these frequencies in the place of other operational circuits permitted by the Commission's Rules. Circuits operating on these frequencies may be used only for coordinating the repair of wireline or point-to-point microwave circuits.

(15) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of § 90.265.

(16) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(17) Assignment of frequencies in this band are subject to the provisions of § 90.173.

(18) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(19) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(e) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service: (See also § 90.253.)

(1) [Reserved]

(2) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(3) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(f) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies

will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation;

(2) Frequencies in ranges 30.56–30.57 MHz, 35.00–35.01 MHz, 35.99–36.00 MHz, and 37.00–37.01 MHz are available for assignment of applicants in this service subject to the provisions of subpart Q notwithstanding this limitation.

(3) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.81, see the List of CFR Sections Affected in the Finding Aids section of this volume.

Subpart E—Land Transportation Radio Services

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, subpart E, consisting of §§ 90.85–90.95, was removed and reserved, effective Oct. 17, 1997.

§ 90.85 Scope.

The Land Transportation Radio Services include the Motor Carrier, Railroad, Taxicab and Automobile Emergency Radio Services. Rules as to eligibility for licensing, permissible communications, assignable frequencies, and any special requirements as to each of these radio services are set forth in the following sections.

[43 FR 54791, Nov. 22, 1978, as amended at 54 FR 39739, Sept. 28, 1989]

§ 90.87 General eligibility.

(a) In addition to the eligibility shown in each Land Transportation Radio Service, eligibility is also provided for any corporation proposing to furnish non-profit radiocommunication

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service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary provided the party served is regularly engaged in any of the eligibility activities set forth in the particular service involved. This corporate eligibility is not subject to the cooperative use provisions of § 90.179.

(b) Eligibility is also provided for a non-profit corporation or association that is organized for the purpose of furnishing a radiocommunication service to persons actually engaged in any of the eligibility activities set forth in the particular service involved. Such use is subject to the cooperative use provisions of § 90.179.

[47 FR 19538, May 6, 1982]

§ 90.89 Motor Carrier Radio Service.

(a) *Eligibility.* Persons primarily engaged in providing a common or contract motor carrier transportation service in any of the following activities are eligible to hold authorizations in the Motor Carrier Radio Service to operate radio stations for transmission of communications essential to such activities of the licensee: Provided, however, That motor vehicles used as taxicabs, livery vehicles, or school buses, and motor vehicles used for sightseeing or special charter purposes, shall not be included within the meaning of this term as used in the Motor Carrier Radio Service. For purposes of this rule, an urban area is defined as being one or more contiguous, incorporated or unincorporated cities, boroughs, towns, or villages, have aggregate population of 2,500 or more persons.

(1) The transportation of passengers between urban areas.

(2) The transportation of property between urban areas.

(3) The transportation of passengers within a single urban area.

(4) The transportation, local distribution or collection of property within a single urban area.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Motor Carrier Radio Service, together with the class of station(s) to which they are normally assigned; and the specific assignment limitations, which

are explained in paragraph (c) of this section:

MOTOR CARRIER RADIO SERVICE FREQUENCY
TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
30.66	Base or mobile	1, 2
30.74 .....	....do	1, 2
30.82 .....	....do	1, 2
30.86 .....	....do	1, 3
30.90 .....	....do	1, 3
30.94 .....	....do	1, 3
30.98 .....	....do	1, 3
31.02 .....	....do	1, 3
31.06 .....	....do	1, 3
31.08 .....	....do	1
31.10 .....	....do	1, 3
31.12 .....	....do	1
31.14 .....	....do	1, 3
43.70 .....	....do	4
43.72 .....	....do	4, 23
43.74 .....	....do	4, 23
43.76 .....	....do	4
43.78 .....	....do	4
43.80 .....	....do	4
43.82 .....	....do	4, 23
43.84 .....	....do	4, 23
43.86 .....	....do	5, 6
43.88 .....	....do	5, 6
43.90 .....	....do	5, 6
43.92 .....	....do	5, 6, 23
43.94 .....	....do	5, 6
43.96 .....	....do	5, 23
43.98 .....	....do	5
44.00 .....	....do	5
44.02 .....	....do	5
44.04 .....	....do	5
44.06 .....	....do	5
44.08 .....	....do	5
44.10 .....	....do	5, 19
44.12 .....	....do	5, 23
44.14 .....	....do	5
44.16 .....	....do	5, 23
44.18 .....	....do	5, 23
44.20 .....	....do	5, 20, 23
44.22 .....	....do	5
44.24 .....	....do	5
44.26 .....	....do	5
44.28 .....	....do	5
44.30 .....	....do	5
44.32 .....	....do	5, 23
44.34 .....	....do	5
44.36 .....	....do	5, 6, 23
44.38 .....	....do	5, 6
44.40 .....	....do	5, 6, 23
44.42 .....	....do	5, 6
44.44 .....	....do	5, 6
44.46 .....	....do	1, 23
44.48 .....	....do	1, 23
44.50 .....	....do	1
44.52 .....	....do	1
44.54 .....	....do	1
44.56 .....	....do	1
44.58 .....	....do	1
44.60 .....	....do	1
72.0-76.0	Operational fixed	7
150 to 170	Base or mobile	24, 27
159.495 .....	....do	8
159.5025 .....	....do	8, 21
159.510 .....	....do	8

MOTOR CARRIER RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
159.5175 .....	.....do	8, 21
159.525 .....	.....do	8
159.5325 .....	.....do	8, 21
159.540 .....	.....do	8
159.5475 .....	.....do	8, 21
159.555 .....	.....do	8
159.5625 .....	.....do	8, 21
159.570 .....	.....do	8
159.5775 .....	.....do	8, 21
159.585 .....	.....do	8
159.5925 .....	.....do	8, 21
159.600 .....	.....do	8
159.6075 .....	.....do	8, 21
159.615 .....	.....do	8
159.6225 .....	.....do	8, 21
159.630 .....	.....do	8
159.6375 .....	.....do	8, 21
159.645 .....	.....do	8
159.6525 .....	.....do	8, 21
159.660 .....	.....do	8
159.6675 .....	.....do	8, 21
159.675 .....	.....do	8
159.6825 .....	.....do	8, 21
159.690 .....	.....do	8
159.6975 .....	.....do	8, 21
159.705 .....	.....do	8
159.7125 .....	.....do	8, 21
159.720 .....	.....do	8
159.7275 .....	.....do	8, 21
159.735 .....	.....do	8
159.7425 .....	.....do	8, 21
159.750 .....	.....do	8
159.7575 .....	.....do	8, 21
159.765 .....	.....do	8
159.7725 .....	.....do	8, 21
159.780 .....	.....do	8
159.7875 .....	.....do	8, 21
159.795 .....	.....do	8
159.8025 .....	.....do	8, 21
159.810 .....	.....do	8
159.8175 .....	.....do	8, 21
159.825 .....	.....do	8
159.8325 .....	.....do	8, 21
159.840 .....	.....do	8
159.8475 .....	.....do	8, 21
159.855 .....	.....do	8
159.8625 .....	.....do	8, 21
159.870 .....	.....do	8
159.8775 .....	.....do	8, 21
159.885 .....	.....do	8
159.8925 .....	.....do	8, 21
159.900 .....	.....do	8
159.9075 .....	.....do	8, 21
159.915 .....	.....do	8
159.9225 .....	.....do	8, 21
159.930 .....	.....do	8
159.9375 .....	.....do	8, 21
159.945 .....	.....do	8
159.9525 .....	.....do	8, 21
159.960 .....	.....do	8
159.9675 .....	.....do	8, 21
159.975 .....	.....do	8
159.9825 .....	.....do	8, 21
159.990 .....	.....do	8
159.9975 .....	.....do	8, 21
160.005 .....	.....do	8
160.0125 .....	.....do	8, 21
160.020 .....	.....do	8
160.0275 .....	.....do	8, 21
160.035 .....	.....do	8

MOTOR CARRIER RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
160.0425 .....	.....do	8, 21
160.050 .....	.....do	8
160.0575 .....	.....do	8, 21
160.065 .....	.....do	8
160.0725 .....	.....do	8, 21
160.080 .....	.....do	8
160.0875 .....	.....do	8, 21
160.095 .....	.....do	8
160.1025 .....	.....do	8, 21
160.110 .....	.....do	8
160.1175 .....	.....do	8, 21
160.125 .....	.....do	8
160.1325 .....	.....do	8, 21
160.140 .....	.....do	8
160.1475 .....	.....do	8, 21
160.155 .....	.....do	8
160.1625 .....	.....do	8, 21
160.170 .....	.....do	8
160.1775 .....	.....do	8, 21
160.185 .....	.....do	8
160.1925 .....	.....do	8, 21
160.200 .....	.....do	8
160.2075 .....	.....do	8, 21
169–172	Mobile	17
220–222	Base and mobile	22
450–470	Fixed, base, or mobile	9, 24
452.3125	Mobile	25
452.325	Base or mobile	10
452.33125 .....	.....do	10, 26
452.33750 .....	.....do	10, 21
452.34375 .....	.....do	10, 26
452.3625	Mobile	25
452.375	Base or mobile	10
452.38125 .....	.....do	10, 26
452.38750 .....	.....do	10, 21
452.39375 .....	.....do	10, 26
452.4125	Mobile	25
452.425	Base or mobile	10
452.43125 .....	.....do	10, 26
452.43750 .....	.....do	10, 21
452.44375 .....	.....do	10, 26
452.4625	Mobile	25
452.475	Base or mobile	10
452.48125 .....	.....do	10, 26
452.48750 .....	.....do	10, 21
452.49375 .....	.....do	10, 26
452.6125	Mobile	25
452.625	Base or mobile .....	.....
452.63125 .....	.....do	26
452.63750 .....	.....do	21
452.64375 .....	.....do	26
452.650 .....	.....do .....	.....
452.65625 .....	.....do	26
452.66250 .....	.....do	21
452.66875 .....	.....do	26
452.675 .....	.....do .....	.....
452.68125 .....	.....do	26
452.68750 .....	.....do	21
452.69375 .....	.....do	26
452.700 .....	.....do .....	.....
452.70625 .....	.....do	26
452.71250 .....	.....do	21
452.71875 .....	.....do	26
452.725 .....	.....do .....	.....
452.73125 .....	.....do	26
452.73750 .....	.....do	21
452.74375 .....	.....do	26
452.750 .....	.....do .....	.....
452.75625 .....	.....do	26
452.76250 .....	.....do	21

MOTOR CARRIER RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
452.76875 .....	.....do	26
452.775 .....	.....do	10
452.78125 .....	.....do	10, 26
452.78750 .....	.....do	10, 21
452.79375 .....	.....do	10, 26
452.800 .....	.....do	
452.80625 .....	.....do	26
452.81250 .....	.....do	21
452.81875 .....	.....do	26
452.825 .....	.....do	10
452.83125 .....	.....do	10, 26
452.83750 .....	.....do	10, 21
452.84375 .....	.....do	10, 26
452.850 .....	.....do	
452.85625 .....	.....do	26
452.86250 .....	.....do	21
452.86875 .....	.....do	26
452.875 .....	.....do	10
452.88125 .....	.....do	10, 26
452.88750 .....	.....do	10, 21
452.89375 .....	.....do	10, 26
457.3125	Mobile	25
457.325 .....	.....do	10
457.33125 .....	.....do	10, 26
457.33750 .....	.....do	10, 21
457.34375 .....	.....do	10, 26
457.3625 .....	.....do	25
457.375 .....	.....do	10
457.38125 .....	.....do	10, 26
457.38750 .....	.....do	10, 21
457.39375 .....	.....do	10, 26
457.4125 .....	.....do	25
457.425 .....	.....do	10
457.43125 .....	.....do	10, 26
457.43750 .....	.....do	10, 21
457.44375 .....	.....do	10, 26
457.4625 .....	.....do	25
457.475 .....	.....do	10
457.48125 .....	.....do	10, 26
457.48750 .....	.....do	10, 21
457.49375 .....	.....do	10, 26
457.6125 .....	.....do	25
457.625 .....	.....do	
457.63125 .....	.....do	26
457.63750 .....	.....do	21
457.64375 .....	.....do	26
457.650 .....	.....do	
457.65625 .....	.....do	26
457.66250 .....	.....do	21
457.66875 .....	.....do	26
457.675 .....	.....do	
457.68125 .....	.....do	26
457.68750 .....	.....do	21
457.69375 .....	.....do	26
457.700 .....	.....do	
457.70625 .....	.....do	26
457.71250 .....	.....do	21
457.71875 .....	.....do	26
457.725 .....	.....do	
457.73125 .....	.....do	26
457.73750 .....	.....do	21
457.74375 .....	.....do	26
457.750 .....	.....do	
457.75625 .....	.....do	26
457.76250 .....	.....do	21
457.76875 .....	.....do	26
457.775 .....	.....do	10
457.78125 .....	.....do	10, 26
457.78750 .....	.....do	10, 21
457.79375 .....	.....do	10, 26

MOTOR CARRIER RADIO SERVICE FREQUENCY
TABLE—Continued

Frequency or band	Class of station(s)	Limitations
457.800 .....	.....do	
457.80625 .....	.....do	26
457.81250 .....	.....do	21
457.81875 .....	.....do	26
457.825 .....	.....do	10
457.83125 .....	.....do	10, 26
457.83750 .....	.....do	10, 21
457.84375 .....	.....do	10, 26
457.850 .....	.....do	
457.85625 .....	.....do	26
457.86250 .....	.....do	21
457.86875 .....	.....do	26
457.875 .....	.....do	10
457.88125 .....	.....do	10, 26
457.88750 .....	.....do	10, 21
457.89375 .....	.....do	10, 26
470 to 512	Base or mobile	11
806 to 821	Mobile	12
851 to 866	Base or mobile	12
896 to 901	Mobile	12
928 and above	Operational fixed	13
929–930	Base only	18
935 to 940	Base or mobile	12
1427 to 1435	Operational fixed, base or mobile	14
2450 to 2500	Base or mobile	15
8400 to 8500 .....	.....do	16
10,550 to 10,680* .....	.....do	

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) This frequency is available for assignment in this service only to common and contract motor carriers of passengers within a single urban area.

(2) This frequency is available on a shared basis with the Petroleum Radio Service.

(3) This frequency is available on a shared basis with stations in the Forestry-Conservation Radio Service.

(4) This frequency is available for assignment in this service only to common and contract motor carriers of passengers between urban areas.

(5) This frequency is available for assignment in this service only to common and contract motor carriers of property between urban areas.

(6) In addition to single frequency operation, this frequency is available to base and mobile stations for the paired frequency mode of operation. For two

frequency systems, the separation between base and mobile transmit frequencies is 500 kHz with the base stations transmitting on the higher of the two frequencies.

(7) The frequencies available for use at operational fixed stations in the band 72–76 MHz are listed in § 90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of § 90.257.

(8) This frequency is available for assignment in this service only to common and contract motor carriers of property.

(9) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(10) This frequency is shared in the Motor Carrier and Railroad Radio Services. It may be assigned only when all of the frequencies in the 450–470 MHz band allocated to the service in which the applicant is primarily eligible are assigned within 56 km. (35 mi.) of the proposed base station.

(11) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(12) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(13) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(14) This frequency is available to stations in this service subject to the provisions of § 90.259.

(15) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(16) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(17) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of § 90.265.

(18) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(19) In the State of Alaska only, the frequency 44.10 MHz is available for assignment on a primary basis to stations in the Common Carrier Rural Radio Service utilizing meteor burst communications. The frequency may be used by private radio stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance with parts 22 and 90 of this chapter. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(20) In the State of Alaska only, the frequency 44.20 MHz is available for assignment on a primary basis to private land mobile radio stations utilizing meteor burst communications. The frequency may be used by common carrier stations for meteor burst communications on a secondary, noninterference basis. Usage shall be in accordance with parts 22 and 90 of this chapter. Stations utilizing meteor burst communications shall not cause harmful interference to stations of other radio services operating in accordance with the allocation table.

(21) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(22) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(23) This frequency is also used on a secondary basis for cordless telephones under part 15 of this chapter.

(24) Licensing for frequencies in this band are subject to the provisions of § 90.173.

(25) This frequency is available for systems first licensed prior to August

18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(26) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(27) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service: (See also § 90.253.)

(1) [Reserved]

(2) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also § 90.257.)

(3) The frequency band 33.00–33.01 MHz may be used for developmental operations subject to the provisions of subpart Q. Any type of emission other than pulsed emission may be used if the bandwidth occupied by the emission is contained within the assigned frequency band.

(4) Frequencies in the 421–430, MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247, notwithstanding this limitation.

(2) Frequencies in the 25–50, 150–170, 450–512, and 902–928 MHz bands may be assigned for the operation of Location

and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.89, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.91 Railroad Radio Service.

(a) *Eligibility.* Railroad common carriers which are regularly engaged in the transportation of passengers or property when such passengers or property are transported over all or part of their route by railroad are eligible to hold authorizations in the Railroad Radio Service to operate radio stations for transmission of communications and to assure safety of operations essential to such activities of the licensee.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Railroad Radio Service, together with the class of station(s) to which they are normally assigned; and the specific assignment limitations, which are explained in paragraph (d) of this section:

RAILROAD RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
72.0 to 76.0	Operational fixed	1
72.44	Mobile	2
72.48 .....	.....do	2
72.52 .....	.....do	2
72.56 .....	.....do	2
72.60 .....	.....do	2
74.61 .....	.....do	21
74.63 .....	.....do	21
74.65 .....	.....do	21
74.67 .....	.....do	21
74.69 .....	.....do	21
74.71 .....	.....do	21
74.73 .....	.....do	21
74.75 .....	.....do	21
74.77 .....	.....do	21
74.79 .....	.....do	21
75.21 .....	.....do	21
75.23 .....	.....do	21
75.25 .....	.....do	21
75.27 .....	.....do	21
75.29 .....	.....do	21
75.31 .....	.....do	21
75.33 .....	.....do	21

RAILROAD RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
75.35 .....	.....do	21
75.37 .....	.....do	21
75.39 .....	.....do	21
75.44 .....	.....do	2
75.48 .....	.....do	2
75.52 .....	.....do	2
75.56 .....	.....do	2
75.60 .....	.....do	2
150 to 170	Base or mobile	23, 25
160.215 .....	.....do	3, 4
160.2225 .....	.....do	3, 4, 18
160.230 .....	.....do	3, 4
160.2375 .....	.....do	3, 4, 18
160.245 .....	.....do	3, 4
160.2525 .....	.....do	3, 4, 18
160.260 .....	.....do	3, 4
160.2675 .....	.....do	3, 4, 18
160.275 .....	.....do	3, 4
160.2825 .....	.....do	3, 4, 18
160.290 .....	.....do	3, 4
160.2975 .....	.....do	3, 4, 18
160.305 .....	.....do	3, 4
160.3125 .....	.....do	3, 4, 18
160.320 .....	.....do	3, 4
160.3275 .....	.....do	3, 4, 18
160.335 .....	.....do	3, 4
160.3425 .....	.....do	3, 4, 18
160.350 .....	.....do	3, 4
160.3575 .....	.....do	3, 4, 18
160.365 .....	.....do	3, 4
160.3725 .....	.....do	3, 4, 18
160.380 .....	.....do	3, 4
160.3875 .....	.....do	3, 4, 18
160.395 .....	.....do	3, 4
160.4025 .....	.....do	3, 4, 18
160.410 .....	.....do	3, 4, 5
160.4175 .....	.....do	3, 4, 5, 18
160.425 .....	.....do	3, 4, 5
160.4325 .....	.....do	3, 4, 5, 18
160.440 .....	.....do	3, 4, 5
160.4475 .....	.....do	3, 4, 5, 18
160.455 .....	.....do	3, 4, 5
160.4625 .....	.....do	3, 4, 5, 18
160.470 .....	.....do	3, 4, 5
160.4775 .....	.....do	3, 4, 5, 18
160.485 .....	.....do	3, 4, 5
160.4925 .....	.....do	3, 4, 5, 18
160.500 .....	.....do	3, 4, 5
160.5075 .....	.....do	3, 4, 5, 18
160.515 .....	.....do	3, 4, 5
160.5225 .....	.....do	3, 4, 5, 18
160.530 .....	.....do	3, 4, 5
160.5375 .....	.....do	3, 4, 5, 18
160.545 .....	.....do	3, 4, 5
160.5525 .....	.....do	3, 4, 5, 18
160.560 .....	.....do	3, 4, 5
160.5675 .....	.....do	3, 4, 5, 18
160.575 .....	.....do	3, 4, 5
160.5825 .....	.....do	3, 4, 5, 18
160.590 .....	.....do	3, 4, 5
160.5975 .....	.....do	3, 4, 5, 18
160.605 .....	.....do	3, 4, 5
160.6125 .....	.....do	3, 4, 5, 18
160.620 .....	.....do	3, 4
160.6275 .....	.....do	3, 4, 18
160.635 .....	.....do	3, 4
160.6425 .....	.....do	3, 4, 18
160.650 .....	.....do	3, 4
160.6575 .....	.....do	3, 4, 18
160.665 .....	.....do	3, 4
160.6725 .....	.....do	3, 4, 18

RAILROAD RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
160.680 .....	.....do	3, 4
160.6875 .....	.....do	3, 4, 18
160.695 .....	.....do	3, 4
160.7025 .....	.....do	3, 4, 18
160.710 .....	.....do	3, 4
160.7175 .....	.....do	3, 4, 18
160.725 .....	.....do	3, 4
160.7325 .....	.....do	3, 4, 18
160.740 .....	.....do	3, 4
160.7475 .....	.....do	3, 4, 18
160.755 .....	.....do	3, 4
160.7625 .....	.....do	3, 4, 18
160.770 .....	.....do	3, 4
160.7775 .....	.....do	3, 4, 18
160.785 .....	.....do	3, 4
160.7925 .....	.....do	3, 4, 18
160.800 .....	.....do	3, 4
160.8075 .....	.....do	3, 4, 18
160.815 .....	.....do	3, 4
160.8225 .....	.....do	3, 4, 18
160.830 .....	.....do	3, 4
160.8375 .....	.....do	3, 4, 18
160.845 .....	.....do	3, 4
160.8525 .....	.....do	3, 4, 18
160.860 .....	.....do	3, 4, 6
160.8675 .....	.....do	3, 4, 6, 18
160.875 .....	.....do	3, 4, 6
160.8825 .....	.....do	3, 4, 6, 18
160.890 .....	.....do	3, 4, 6
160.8975 .....	.....do	3, 4, 6, 18
160.905 .....	.....do	3, 4, 6
160.9125 .....	.....do	3, 4, 6, 18
160.920 .....	.....do	3, 4, 6
160.9275 .....	.....do	3, 4, 6, 18
160.935 .....	.....do	3, 4, 6
160.9425 .....	.....do	3, 4, 6, 18
160.950 .....	.....do	3, 4, 6
160.9575 .....	.....do	3, 4, 6, 18
160.965 .....	.....do	3, 4, 6
160.9725 .....	.....do	3, 4, 6, 18
160.980 .....	.....do	3, 4, 6
160.9875 .....	.....do	3, 4, 6, 18
160.995 .....	.....do	3, 4, 6
161.0025 .....	.....do	3, 4, 6, 18
161.010 .....	.....do	3, 4, 6
161.0175 .....	.....do	3, 4, 6, 18
161.025 .....	.....do	3, 4, 6
161.0325 .....	.....do	3, 4, 6, 18
161.040 .....	.....do	3, 4, 6
161.0475 .....	.....do	3, 4, 6, 18
161.055 .....	.....do	3, 4, 6
161.0625 .....	.....do	3, 4, 6, 18
161.070 .....	.....do	3, 4, 6
161.0775 .....	.....do	3, 4, 6, 18
161.085 .....	.....do	3, 4, 6
161.0925 .....	.....do	3, 4, 6, 18
161.100 .....	.....do	3, 4, 6
161.1075 .....	.....do	3, 4, 6, 18
161.115 .....	.....do	3, 4, 6
161.1225 .....	.....do	3, 4, 6, 18
161.130 .....	.....do	3, 4, 6
161.1375 .....	.....do	3, 4, 6, 18
161.145 .....	.....do	3, 4, 6
161.1525 .....	.....do	3, 4, 6, 18
161.160 .....	.....do	3, 4, 6
161.1675 .....	.....do	3, 4, 6, 18
161.175do	3, 4, 6
161.1825do	3, 4, 6, 18
161.190do	3, 4, 6
161.1975do	3, 4, 6, 18
161.205do	3, 4, 6

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RAILROAD RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
161.2125 .....	.....do	3, 4, 6, 18
161.220 .....	.....do	3, 4, 6
161.2275 .....	.....do	3, 4, 6, 18
161.235 .....	.....do	3, 4, 6
161.2425 .....	.....do	3, 4, 6, 18
161.250 .....	.....do	3, 4, 6
161.2575 .....	.....do	3, 4, 6, 18
161.265 .....	.....do	3, 4, 6
161.2725 .....	.....do	3, 4, 6, 18
161.280 .....	.....do	3, 4, 6
161.2875 .....	.....do	3, 4, 6, 18
161.295 .....	.....do	3, 4, 6
161.3025 .....	.....do	3, 4, 6, 18
161.310 .....	.....do	3, 4, 6
161.3175 .....	.....do	3, 4, 6, 18
161.325 .....	.....do	3, 4, 6
161.3325 .....	.....do	3, 4, 6, 18
161.340 .....	.....do	3, 4, 6
161.3475 .....	.....do	3, 4, 6, 18
161.355 .....	.....do	3, 4, 6
161.3625 .....	.....do	3, 4, 6, 18
161.370 .....	.....do	3, 4, 6
161.3775 .....	.....do	3, 4, 6, 18
161.385 .....	.....do	3, 4, 7
161.3925 .....	.....do	3, 4, 7, 18
161.400 .....	.....do	3, 4, 7
161.4075 .....	.....do	3, 4, 7, 18
161.415 .....	.....do	3, 4, 7
161.4225 .....	.....do	3, 4, 7, 18
161.430 .....	.....do	3, 4, 7
161.4375 .....	.....do	3, 4, 7, 18
161.445 .....	.....do	3, 4, 7
161.4525 .....	.....do	3, 4, 7, 18
161.460 .....	.....do	3, 4, 7
161.4675 .....	.....do	3, 4, 7, 18
161.475 .....	.....do	3, 4, 7
161.4825 .....	.....do	3, 4, 7, 18
161.490 .....	.....do	3, 4, 7
161.4975 .....	.....do	3, 4, 7, 18
161.505 .....	.....do	3, 4, 7
161.5125 .....	.....do	3, 4, 7, 18
161.520 .....	.....do	3, 4, 7
161.5275 .....	.....do	3, 4, 7, 18
161.535 .....	.....do	3, 4, 7
161.5425 .....	.....do	3, 4, 7, 18
161.550 .....	.....do	3, 4, 7
161.5575 .....	.....do	3, 4, 7, 18
161.565 .....	.....do	3, 4, 7
169 to 172	Mobile, operational fixed.	8
220–222	Base and mobile	20
406 to 413	Operational fixed	8
450 to 470	Fixed, base, or mobile	9, 23
452.3125	Mobile	24
452.325	Base or mobile	10
452.33125 .....	.....do	10, 22
452.33750 .....	.....do	10, 18
452.34375 .....	.....do	10, 22
452.3625	Mobile	24
452.375	Base or mobile	10
452.38125 .....	.....do	10, 22
452.38750 .....	.....do	10, 18
452.39375 .....	.....do	10, 22
452.4125	Mobile	24
452.425	Base or mobile	10
452.43125 .....	.....do	10, 22
452.43750 .....	.....do	10, 18
452.44375 .....	.....do	10, 22
452.4625	Mobile	24
452.475	Base or mobile	10
452.48125 .....	.....do	10, 22

RAILROAD RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
452.48750 .....	.....do	10, 18
452.49375 .....	.....do	10, 22
452.7625	Mobile	24
452.775	Base or mobile	10
452.78125 .....	.....do	10, 22
452.78750 .....	.....do	10, 18
452.79375 .....	.....do	10, 22
452.8125	Mobile	24
452.825	Base or mobile	10
452.83125 .....	.....do	10, 22
452.83750 .....	.....do	10, 18
452.84375 .....	.....do	10, 22
452.8625	Mobile	24
452.875	Base or mobile	10
452.88125 .....	.....do	10, 22
452.88750 .....	.....do	10, 18
452.89375 .....	.....do	10, 22
452.900 .....	.....do .....	.....
452.90625 .....	.....do	22
452.91250 .....	.....do	18
452.91875 .....	.....do	22
452.925 .....	.....do	11
452.93125 .....	.....do	11, 22
452.93750 .....	.....do	11, 18
452.94375 .....	.....do	11, 22
452.950 .....	.....do	11
452.95625 .....	.....do	11, 22
452.96250 .....	.....do	11, 18
452.96875 .....	.....do	11, 22
457.3125	Mobile	24
457.325 .....	.....do	10
457.33125 .....	.....do	10, 22
457.33750 .....	.....do	10, 18
457.34375 .....	.....do	10, 22
457.3625 .....	.....do	24
457.375 .....	.....do	10
457.38125 .....	.....do	10, 22
457.38750 .....	.....do	10, 18
457.39375 .....	.....do	10, 22
457.4125 .....	.....do	24
457.425 .....	.....do	10
457.43125 .....	.....do	10, 22
457.43750 .....	.....do	10, 18
457.44375 .....	.....do	10, 22
457.4625 .....	.....do	24
457.475 .....	.....do	10
457.48125 .....	.....do	10, 22
457.48750 .....	.....do	10, 18
457.49375 .....	.....do	10, 22
457.7625 .....	.....do	24
457.775 .....	.....do	10
457.78125 .....	.....do	10, 22
457.78750 .....	.....do	10, 18
457.79375 .....	.....do	10, 22
457.8125 .....	.....do	24
457.825 .....	.....do	10
457.83125 .....	.....do	10, 22
457.83750 .....	.....do	10, 18
457.84375 .....	.....do	10, 22
457.8625 .....	.....do	24
457.875 .....	.....do	10
457.88125 .....	.....do	10, 22
457.88750 .....	.....do	10, 18
457.89375 .....	.....do	10, 22
457.900 .....	.....do .....	.....
457.90625 .....	.....do	22
457.91250 .....	.....do	18
457.91875 .....	.....do	22
457.925 .....	.....do	11
457.93125 .....	.....do	11, 22
457.93750 .....	.....do	11, 18

RAILROAD RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
457.94375 .....	.....do	11, 22
457.950 .....	.....do	11
457.95625 .....	.....do	11, 22
457.96250 .....	.....do	11, 18
457.96875 .....	.....do	11, 22
470 to 512	Base or mobile	12
806 to 821	Mobile	13
851 to 866	Base or mobile	13
896 to 901	Mobile	13
928 and above	Operational fixed	14
929–930	Base only	19
935 to 940	Base or mobile	13
1427 to 1435	Operational fixed, base or mobile	15
2450 to 2500	Base or mobile	16
8400 to 8500 .....	.....do	17
10,550 to 10,680* .....	.....do	

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (c) of this section:

(1) The frequencies available for assignment to operational fixed stations in the band 72.0 to 76.0 MHz are listed in §90.257(a)(1). These frequencies which are shared with other services, are available only in accordance with the provisions of §90.257.

(2) This frequency is available on a shared basis in the Manufacturers, Forest Products, Special Industrial, Railroad, and Fire Radio Services and interservice coordination is required. All communications must be within the boundaries or confines of railroad terminals or yards. All operations on this frequency are subject to the provisions of §90.257(b).

(3) This frequency may be used for the following:

(i) End-to-end, fixed point-to-train, or train-to-train communications in connection with the operation of railroad trains over a track, in yards, or tracks extending through yards and between stations upon which trains are operated by timetable, train order, or both, or the use of which is governed by block signals.

(ii) Intercommunication between adjacent base stations, provided interference is not caused to communications involving radio stations aboard railroad rolling stock.

(iii) Transmission of tone signals for signaling purposes or for remote control of locomotives, including slave locomotives placed within a train to assist the lead locomotive by providing, among other functions auxiliary starting, pulling, and braking actions; and radio controlled cab indicator devices that are placed within a locomotive to give visual signals to the operator of the locomotive.

(4) This frequency may also be used for the transmission of tone or voice communications, including such communications when prerecorded, for purposes of automatically indicating abnormal conditions of trackage and railroad rolling stock when in motion, on a secondary basis to other stations on this frequency. All such operations shall be subject to the following:

(i) The output power shall not exceed 30 watts.

(ii) The bandwidth used shall not exceed that authorized to the licensee for voice transmissions on the frequency concerned.

(iii) The station shall be so designed and installed that it can normally be activated only by its associated automatic control equipment and, in addition, it shall be equipped with a time delay or clock device which will deactivate the station within three (3) minutes following activation by the last car in the train.

(iv) Stations authorized pursuant to the provisions of this subparagraph are exempt from the station identification requirements of §90.425.

(5) This frequency is shared with and must be coordinated with the Special Industrial Radio Service in Puerto Rico and the Virgin Islands.

(6) In Puerto Rico and the Virgin Islands only, this frequency is available on a shared basis with remote pickup broadcast stations.

(7) In Puerto Rico and the Virgin Islands only, this frequency is not available to stations operating in the Railroad Radio Service.

(8) Frequencies in this band will be assigned only for transmitting hydrological or meteorological data or for low power wireless microphones in accordance with the provisions of §90.265.

(9) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(10) This frequency is shared in the Motor Carrier and Railroad Radio Services. It may be assigned only when all of the frequencies in the 450–470 MHz band allocated to the service in which the applicant is primarily eligible are assigned within 56 km. (35 mi.) of the proposed base station.

(11) This frequency may be assigned primarily for stations used for the purpose of controlling slave locomotives that are placed within a train to assist the lead locomotive by providing, among other functions, auxiliary starting, pulling, and braking actions. Additionally, on a secondary basis this frequency may be assigned for remote control of all types of locomotives and, within a railroad yard or terminal area, for remote control of cab indicator devices placed with a locomotive to give visual signals to the operator of the locomotive. (A1, A2, F1 or F2 emissions may be authorized.)

(12) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(13) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(14) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(15) This frequency band is available to stations in this services subject to the provisions of §90.259.

(16) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(17) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(18) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

(19) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.i

(20) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(21) This frequency is available on a shared basis in the Power, Petroleum, Business, and Manufacturers Radio Services and interservice coordination is required. All communications must be within the boundaries or confines of railroad terminals or yards. All operations on this frequency are subject to the provisions of §90.257(b). Pulsed modulations will not be authorized.

(22) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(23) Assignment of frequencies in this band are subject to the provisions of §90.173

(24) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(25) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Additional frequencies available.* In addition to the frequencies shown in the frequency table of this section, the following frequencies are available in this service: (See also §90.253).

(1) [Reserved]

(2) Frequencies in the band 73.0–74.6 MHz may be assigned to stations authorized their use on or before December 1, 1961, but no new stations will be authorized in this band, nor will expansion of existing systems be permitted. (See also §90.257.)

(3) Base and mobile stations authorized as of April 1, 1968, to operate on

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frequency 161.61 MHz may continue to be authorized for such operation on a secondary basis to the Maritime Mobile Service. The licensees of such stations may renew, modify, reinstate, or assign their licenses in those cases where such assignment accompanies a change of ownership of the licensee's business to the assignee, and may expand existing systems when using that frequency; however, they will not be authorized to establish any new systems on the frequency.

(4) Stations authorized for operation on or before June 11, 1962, on the frequencies 169.575, 170.375, 171.175, 171.975, or 406.050 MHz may continue to be authorized for such operation on a secondary basis to Government stations.

(5) The frequency band 33.00–33.01 MHz may be used for developmental operation subject to the provisions of subpart Q. Any type of emission other than pulsed emission may be used if the bandwidth occupied by the emission is contained within the assigned frequency band.

(6) Frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned from mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that:

(1) Additional frequencies above 25 MHz may be assigned in connection with operation of mobile repeaters in accordance with § 90.247 notwithstanding this limitation.

(2) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

47 CFR Ch. I (10–1–97 Edition)

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.91, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.93 Taxicab Radio Service.

(a) *Eligibility.* Persons regularly engaged in furnishing to the public for hire a nonscheduled passenger land transportation service (which may also include the occasional transport of small items of property) not operated over a regular route or between established terminals are eligible to hold authorizations in the Taxicab Radio Service to operate radio stations for the transmission of communications essential to such activities of the licensee.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Taxicab Radio Service, together with the class of station(s) to which they are normally assigned; and the specific assignment limitations, which are explained in paragraph (c) of this section:

TAXICAB RADIO SERVICE FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
72–76	Operational fixed	14
150 to 170	Base or mobile	18, 20
152.2625	Base or mobile	17
152.270 .....	.....do .....	.....
152.2775 .....	.....do	15
152.285 .....	.....do .....	.....
152.2925 .....	.....do	15
152.300 .....	.....do	1, 2
152.3075 .....	.....do	1, 2, 15
152.315 .....	.....do	1, 2
152.3225 .....	.....do	1, 2, 15
152.330 .....	.....do .....	.....
152.3375 .....	.....do	15
152.345 .....	.....do	1, 2
152.3525 .....	.....do	1, 2, 15
152.360 .....	.....do	1, 2
152.3675 .....	.....do	1, 2, 15
152.375 .....	.....do	1, 2
152.3825 .....	.....do	1, 2, 15
152.390 .....	.....do .....	.....
152.3975 .....	.....do	15
152.405 .....	.....do	1, 2
152.4125 .....	.....do	1, 2, 15
152.420 .....	.....do	1, 2
152.4275 .....	.....do	1, 2, 15
152.435 .....	.....do .....	.....
152.4425 .....	.....do	15
152.450 .....	.....do .....	.....
152.4575 .....	.....do	15
152.465do	11
157.530	Mobile
157.5375do	15
157.545do
157.5525do	15
157.560do	1, 2

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TAXICAB RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
157.5675 .....	.....do	1, 2, 15
157.575 .....	.....do	1, 2
157.5825 .....	.....do	1, 2, 15
157.590 .....	.....do .....	.....
157.5975 .....	.....do	15
157.605 .....	.....do	1, 2
157.6125 .....	.....do	1, 2, 15
157.620 .....	.....do	1, 2
157.6275 .....	.....do	1, 2, 15
157.635 .....	.....do	1, 2
157.6425 .....	.....do	1, 2, 15
157.650 .....	.....do .....	.....
157.6575 .....	.....do	15
157.665 .....	.....do	1, 2
157.6725 .....	.....do	1, 2, 15
157.680 .....	.....do	1, 2
157.6875 .....	.....do	1, 2, 15
157.695 .....	.....do .....	.....
157.7025 .....	.....do	15
157.710 .....	.....do .....	.....
157.7175 .....	.....do	15
157.725 .....	.....do	11
169–172 .....	.....do	12
220–222	Base and mobile	16
450 to 470	Fixed, base, or mobile	3, 18
452.0375	Mobile	19
452.050	Base or mobile .....	.....
452.05625 .....	.....do	17
452.06250 .....	.....do	15
452.06875 .....	.....do	17
452.0875	Mobile	19
452.100	Base or mobile	10
452.10625 .....	.....do	10, 17
452.11250 .....	.....do	10, 15
452.11875 .....	.....do	10, 17
452.1375	Mobile	19
452.150	Base or mobile .....	.....
452.15625 .....	.....do	17
452.16250 .....	.....do	15
452.16875 .....	.....do	17
452.1875	Mobile	19
452.200	Base or mobile	10
452.20625 .....	.....do	10, 17
452.21250 .....	.....do	10, 15
452.21875 .....	.....do	10, 17
452.225 .....	.....do	10
452.23125 .....	.....do	10, 17
452.23750 .....	.....do	10, 15
452.24375 .....	.....do	10, 17
452.250 .....	.....do	10
452.25625 .....	.....do	10, 17
452.26250 .....	.....do	10, 15
452.26875 .....	.....do	10, 17
452.275 .....	.....do	10
452.28125 .....	.....do	10, 17
452.28750 .....	.....do	10, 15
452.29375 .....	.....do	10, 17
452.300 .....	.....do .....	.....
452.30625 .....	.....do	17
452.31250 .....	.....do	15
452.31875 .....	.....do	17
452.3375	Mobile	19
452.350	Base or mobile	10
452.35625 .....	.....do	10, 17
452.36250 .....	.....do	10, 15
452.36875 .....	.....do	10, 17
452.3875	Mobile	19
452.400	Base or mobile	10
452.40625 .....	.....do	10, 17
452.41250 .....	.....do	10, 15

TAXICAB RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
452.41875 .....	.....do	10, 17
452.4375	Mobile	19
452.450	Base or mobile	10
452.45625 .....	.....do	10, 17
452.46250 .....	.....do	10, 15
452.46875 .....	.....do	10, 17
452.4875	Mobile	19
452.500	Base or mobile .....	.....
452.50625 .....	.....do	17
452.51250 .....	.....do	15
452.51875 .....	.....do	17
457.0375	Mobile	19
457.050 .....	.....do .....	.....
457.05625 .....	.....do	17
457.06250 .....	.....do	15
457.06875 .....	.....do	17
457.0875 .....	.....do	19
457.100 .....	.....do	10
457.10625 .....	.....do	10, 17
457.11250 .....	.....do	10, 15
457.11875 .....	.....do	10, 17
457.1375 .....	.....do	19
457.150 .....	.....do .....	.....
457.15625 .....	.....do	17
457.16250 .....	.....do	15
457.16875 .....	.....do	17
457.1875 .....	.....do	19
457.200 .....	.....do	10
457.20625 .....	.....do	10, 17
457.21250 .....	.....do	10, 15
457.21875 .....	.....do	10, 17
457.225 .....	.....do	10
457.23125 .....	.....do	10, 17
457.23750 .....	.....do	10, 15
457.24375 .....	.....do	10, 17
457.250 .....	.....do	10
457.25625 .....	.....do	10, 17
457.26250 .....	.....do	10, 15
457.26875 .....	.....do	10, 17
457.275 .....	.....do	10
457.28125 .....	.....do	10, 17
457.28750 .....	.....do	10, 15
457.29375 .....	.....do	10, 17
457.300 .....	.....do .....	.....
457.30625 .....	.....do	17
457.31250 .....	.....do	15
457.31875 .....	.....do	17
457.3375 .....	.....do	19
457.350 .....	.....do	10
457.35625 .....	.....do	10, 17
457.36250 .....	.....do	10, 15
457.36875 .....	.....do	10, 17
457.3875 .....	.....do	19
457.400 .....	.....do	10
457.40625 .....	.....do	10, 17
457.41250 .....	.....do	10, 15
457.41875 .....	.....do	10, 17
457.4375 .....	.....do	19
457.450 .....	.....do	10
457.45625 .....	.....do	10, 17
457.46250 .....	.....do	10, 15
457.46875 .....	.....do	10, 17
457.4875 .....	.....do	19
457.500 .....	.....do .....	.....
457.50625 .....	.....do	17
457.51250 .....	.....do	15
457.51875 .....	.....do	17
470–512	Base or mobile	4
806 to 821	Mobile	5
851 to 866	Base or mobile	5

TAXICAB RADIO SERVICE FREQUENCY TABLE—
Continued

Frequency or band	Class of station(s)	Limitations
896 to 901	Mobile	5
928 and above	Operational fixed	6
929–930	Base only	13
935 to 940	Base or mobile	5
1427 to 1435	Base, mobile, or operational fixed.	7
2450 to 2500	Base or mobile	8
8400 to 8500 .....	.....do	9
10,550 to 10,680* .....	.....do .....	.....

*The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated internodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) This frequency is available for assignment only to base or mobile stations operating wholly within Standard Metropolitan Areas having 50,000 or more population (1950 Census).

(2) This frequency is also available to Business Radio Service licensees for use at stations outside Standard Metropolitan Areas having 50,000 or more population (1950 Census).

(3) The requirements for secondary fixed use of frequencies in this band are set forth in §90.261.

(4) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(5) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(6) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(7) This frequency band is available to stations in this service subject to the provisions of §90.259.

(8) Available only on a shared basis with stations in other services, and subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is

co-primary with the Radiodetermination Satellite Service.

(9) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(10) This frequency is shared by stations in the Forest Products Radio Service in the States of Washington, Oregon, Idaho, and Montana in areas at least 64 km (40 miles) removed from the center of urbanized areas of 200,000 or more population, 1970 Decennial Census. (Provided that, taxicab operations within the specified urbanized areas will not be authorized on frequencies shared with the Forest Products Radio Service until the unshared frequencies are fully utilized.) For two-frequency systems, separation between base and mobile transmit frequencies is 5 MHz; however, a mobile station may be assigned the frequency of an associated base station. (Such operation may, however, subject the single-frequency system to interference that would not occur to a two-frequency system.)

(11) This frequency is shared with the Forest Products and Special Industrial Radio Services. Use of this frequency is limited to stations located at least 80.5 km. (50 miles) from the center of any urbanized area of 600,000 or more population (U.S. Census of Population, 1970).

(12) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of §90.265.

(13) Frequencies in this band are available only for one-way paging operations in accordance with §90.494.

(14) The frequencies available for use at operational-fixed stations in the band 72–76 are listed in §90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of §90.257.

(15) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to §90.238(e) will be authorized on this frequency.

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(16) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(17) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(18) Assignment of frequencies in this band are subject to the provisions of § 90.173

(19) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(20) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(d) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that: (See also § 90.253).

(1) [Reserved]

(2) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(3) The frequency band 33.00–33.01 MHz may be used for developmental operation subject to the provisions of subpart Q. Any type of emission other than pulsed emission may be used if the bandwidth occupied by the emission is contained within the assigned frequency band.

(e) In addition to the frequencies shown in the frequency table of this section, frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the

Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.93, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.95 Automobile Emergency Radio Service.

(a) *Eligibility.* Persons regularly engaged in any of the following activities are eligible to hold authorizations in the Automobile Emergency Radio Service to operate radio stations for transmission of communications required for dispatching repair trucks, tow trucks, or other road service vehicles to disabled vehicles.

(1) The operation of a private emergency road service for disabled vehicles by associations of owners of private automobiles.

(2) The business of providing to the general public an emergency road service for disabled vehicles.

(b) *Special permissible communications.* On a secondary basis, the transmission of communications by associations of owners of private automobiles which provide emergency road service for the purpose of reporting traffic conditions is authorized.

(c) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Automobile Emergency Radio Service, together with the class of station(s) to which they are normally assigned; and the specific assignment limitations which are explained in paragraph (d) of this section:

AUTOMOBILE EMERGENCY RADIO SERVICE
FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations
Megahertz		
72–76	Operational fixed	16
150 to 170	Base or mobile	21, 24
150.815 .....	.....do	1, 2, 3
150.830 .....	.....do	1, 2, 3, 22
150.845 .....	.....do	1, 2, 3
150.8525 .....	.....do	1, 2, 3, 18
150.860 .....	.....do	1, 2, 3
150.8675 .....	.....do	1, 2, 3, 18
150.875 .....	.....do	1, 2, 3
150.8825 .....	.....do	1, 2, 3, 18
150.890 .....	.....do	1, 2, 3
150.8975 .....	.....do	1, 2, 3, 18
150.905 .....	.....do	3, 4
150.920 .....	.....do	3, 4, 22

AUTOMOBILE EMERGENCY RADIO SERVICE
FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitations
150.935 .....	.....do	3, 4
150.9425 .....	.....do	3, 4, 18
150.950 .....	.....do	3, 4
150.9575 .....	.....do	3, 4, 18
150.965 .....	.....do	3, 4
150.9725 .....	.....do	3, 4, 18
157.470 .....	.....do	5, 6
157.4775 .....	.....do	5, 6, 18
157.485 .....	.....do	5, 6
157.4925 .....	.....do	5, 6, 18
157.500 .....	.....do	5, 6
157.5075 .....	.....do	5, 6, 18
157.515 .....	.....do	5, 6
157.5225 .....	.....do	5, 6, 18
169–172	Mobile	17
220–222	Base and mobile	19
450 to 470	Fixed, base, or mobile	7, 21
452.5125	Mobile	23
452.525	Base or mobile	8
452.53125 .....	.....do	8, 20
452.53750 .....	.....do	8, 18
452.54375 .....	.....do	8, 20
452.550 .....	.....do	8
452.55625 .....	.....do	8, 20
452.56250 .....	.....do	8, 18
452.56875 .....	.....do	8, 20
452.575 .....	.....do	8
452.58125 .....	.....do	8, 20
452.58750 .....	.....do	8, 18
452.59375 .....	.....do	8, 20
452.600 .....	.....do	8
452.60625 .....	.....do	8, 20
452.61250 .....	.....do	8, 18
452.61875 .....	.....do	8, 20
470 to 512 .....	.....do	9
806 to 821	Mobile	10
851 to 866	Base or mobile	10
896 to 901	Mobile	10
928 and above	Operational fixed	11
929–930	Base only	15
935 to 940	Base or mobile	10
1427 to 1435	Operational fixed, base, or mobile	12
2450 to 2500	Base or mobile	13
8400 to 8500 .....	.....do	14
10,550 to 10,680* .....	.....do .....	.....

* The frequencies in the band 10.55–10.68 GHz are available for Digital Termination Systems and for associated intermodal links in the Point-to-Point Microwave Radio Service. No new licenses will be issued under this subpart but current licenses will be renewed.

(d) Explanation of assignment limitations appearing in the frequency table of paragraph (c) of this section:

(1) This frequency is available only for stations (other than those aboard aircraft) which are operated by or on behalf of persons who provide to the general public an emergency road service for disabled vehicles.

(2) Only one of the frequencies 150.815, 150.8225, 150.830, 150.8375, 150.845, 150.8525, 150.860, 150.8675, 150.875, 150.8825, 150.890, or 150.8975 MHz may be assigned to the same licensee in a given area.

(3) This frequency is not available to stations in this service in Puerto Rico or the Virgin Islands.

(4) This frequency is available for assignment to base stations and to mobile stations (other than those aboard aircraft) which are operated by or on behalf of associations of owners of private automobiles.

(5) This frequency is available for assignment to stations, other than those aboard aircraft, which are operated by or on behalf of persons who provide to the general public an emergency road service for disabled vehicles: Except that; at the discretion of the Commission this frequency may also be operated by or on behalf of associations of owners of private automobiles upon a showing that all other frequencies available for assignment to such stations are currently assigned to other stations for use in the area concerned and that the use of the requested frequency, in each case, will be less likely to result in mutual harmful interference that would the use of a frequency otherwise available to the station.

(6) Only one of the frequencies 157.470, 157.4775, 157.485, 157.4925, 157.500, 157.5075, 157.515, or 157.5225 MHz may be assigned to the same licensee in a given area.

(7) The requirements for secondary fixed use of frequencies in this band are set forth in § 90.261.

(8) This frequency is available for assignment to stations which are operated by or on behalf of associations of owners of private automobiles for single-frequency operation.

(9) Subpart L contains rules for assignment of frequencies in the 470–512 MHz band.

(10) Subpart S contains rules for assignment of frequencies in the 806–821/851–866 and 896–901/935–940 MHz bands.

(11) Assignment of frequencies above 928 MHz for operational-fixed stations is governed by part 94 of this chapter.

(12) This frequency band is available to stations in this service subject to the provisions of § 90.259.

(13) Available only on a shared basis with stations in other services, and

subject to no protection from interference due to the operation of industrial, scientific, or medical (ISM) devices. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(14) Use of this frequency band is limited to developmental operation and is subject to the provisions of subpart Q.

(15) Frequencies in this band are available only for one-way paging operations in accordance with § 90.494.

(16) The frequencies available for use at operational-fixed stations in the band 72–76 MHz are listed in § 90.257(a)(1). These frequencies are shared with other services and are available only in accordance with the provisions of § 90.257.

(17) Frequencies in this band will be assigned for low power wireless microphones in accordance with the provisions of § 90.265.

(18) This frequency is not available in the 150–170 MHz band until August 18, 1996. This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz. In the 450–470 MHz band, secondary telemetry operations pursuant to § 90.238(e) will be authorized on this frequency.

(19) Subpart T contains rules for assignment of frequencies in the 220–222 MHz band.

(20) This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(21) Assignment of frequencies in this band are subject to the provisions of § 90.173

(22) This frequency will be authorized a channel bandwidth of 25 kHz.

(23) This frequency is available for systems first licensed prior to August 18, 1995. No new systems will be authorized after August 18, 1995, but prior authorized systems may be modified, expanded, and renewed.

(24) Licensees as of August 18, 1995 who operate systems that are 2.5 kHz removed from regularly assignable frequencies may continue to operate on a secondary, non-interference basis after August 1, 2003.

(e) *Limitation on number of frequencies assignable.* Normally only one frequency, or pair of frequencies in the paired frequency mode of operation, will be assigned for mobile service operations by a single applicant in a given area. The assignment of an additional frequency or pair of frequencies will be made only upon a satisfactory showing of need, except that: (See also § 90.253.)

(1) [Reserved]

(2) Frequencies in the 25–50 MHz, 150–170 MHz, 450–512 MHz and 902–928 MHz bands may be assigned for the operation of Location and Monitoring Service (LMS) systems in accordance with the provisions of subpart M of this part, notwithstanding this limitation.

(3) The frequency band 33.00–33.01 MHz may be used for developmental operation subject to the provisions of subpart Q. Any type of emission other than pulsed emission may be used if the bandwidth occupied by the emission is contained within the assigned frequency band.

(f) In addition to the frequencies shown in the frequency table of this section, frequencies in the 421–430 MHz band are available in the Detroit, Cleveland, and Buffalo areas in accordance with the rules in §§ 90.273 through 90.281.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§ 0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3); 47 U.S.C. 154(i) and 303)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.95, see the List of CFR Sections Affected in the Finding Aids section of this volume.

Subpart F—Radiolocation Service

§ 90.101 Scope.

The Radiolocation Service accommodates the use of radio methods for determination of direction, distance, speed, or position for purposes other than navigation. Rules as to eligibility

§ 90.103

for licensing, permissible communications, frequency available, and any special requirements are set forth in § 90.103. Provisions for the Location and Monitoring Service (LMS) are contained in subpart M of this part.

[60 FR 15252, Mar. 23, 1995]

§ 90.103 Radiolocation Service.

(a) *Eligibility.* The following persons are eligible for authorizations in the Radiolocation Service to operate stations to determine distance, direction, speed, or position by means of radiolocation devices, for purposes other than navigation:

(1) Any person engaged in a commercial, industrial, scientific, educational, or local government activity

(2) A corporation or association that will furnish radiolocation service to other persons.

(3) A corporation that will furnish a nonprofit radio communication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary where the party to be served is regularly engaged in any of the eligibility activities set forth in this paragraph.

(b) *Frequencies available.* The following table indicates frequencies available for assignment to stations in the Radiolocation Service, together with the class of station(s) to which they are normally assigned, and the specific assignment limitations, which are explained in paragraph (c) of this section:

RADIOLOCATION SERVICE FREQUENCY TABLE		
Frequency or band	Class of station(s)	Limitation
Kilohertz		
70 to 90	Radiolocation land or mobile.	1
90 to 110	Radiolocation land	2
110 to 130	Radiolocation land or mobile.	1
1605 to 1715 .....	.....do	4, 5, 6, 28, and 29.
1715 to 1750 .....	.....do	5, 6
1750 to 1800 .....	.....do	5, 6, 7
1900 to 1950 .....	.....do	6, 25, 26, 27, and 30.
1950 to 2000do	6, 25, 27, and 30.
3230 to 3400do	6, 8
Megahertz		
420 to 450do	21
2450 to 2500do	9, 22, 23

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RADIOLOCATION SERVICE FREQUENCY TABLE—Continued

Frequency or band	Class of station(s)	Limitation
2900 to 3100 .....	.....do	10, 11
3100 to 3300 .....	.....do	12
3300 to 3500 .....	.....do	12, 13
3500 to 3700 .....	.....do	12
5250 to 5350 .....	.....do	12
5350 to 5460 .....	.....do	10, 14
5460 to 5470 .....	.....do	10, 15
5470 to 5600 .....	.....do	10, 11
5600 to 5650 .....	.....do	10, 16
8500 to 9000 .....	.....do	12, 17
9000 to 9200 .....	.....do	10, 14
9200 to 9300 .....	.....do	12
9300 to 9500 .....	.....do	10, 15, 18
9500 to 10,000 .....	.....do	12
10,000 to 10,500 .....	.....do	12, 13, 19
10,500 to 10,550 .....	.....do	20, 22, 24
13,400 to 13,750 .....	.....do	12
13,750 to 14,000 .....	.....do	31
15,700 to 17,700 .....	.....do	12
24,050 to 24,250 .....	.....do	12, 22, 24
33,400 to 36,000 .....	.....do	12

(c) Explanation of assignment limitations appearing in the frequency table of paragraph (b) of this section:

(1) This frequency band is shared with and stations operating in this frequency band in this service are on a secondary basis to stations licensed in the International Fixed Service and the Maritime Mobile Service.

(2) This frequency band is shared with and stations operating in this frequency band in this service are on a secondary basis to the LORAN Navigation System; all operations are limited to radiolocation lands stations in accordance with footnote US104, § 2.106 of this chapter.

(3) [Reserved]

(4) Non-Government radiolocation service in this band is on a secondary basis to stations in the Aeronautical Radionavigation Service operating on 1638 or 1708 kHz.

(5) Station assignments on frequencies in this band will be made subject to the conditions that the maximum output power shall not exceed 375 watts and the maximum authorized bandwidth shall not exceed 2 kHz.

(6) Because of the operation of stations having priority on the same or adjacent frequencies in this or in other countries, frequency assignments in this band may either be unavailable or may be subject to certain technical or operational limitations. Therefore, applications for frequency assignments in this band shall include information

concerning the transmitter output power; the type and directional characteristics of the antenna and the minimum hours of operation (GMT).

(7) This band is shared with the Disaster Communications Service (part 99) and operations are on a secondary basis to that service between local sunset and local sunrise, or at any time during an actual or imminent disaster. Local sunrise and sunset times shall be derived from the 1946 American Nautical Almanac. Each frequency assignment in this band is on an exclusive basis within the daytime primary service area to which assigned. The daytime primary service area is the area where the signal intensities are adequate for radiolocation purposes during the hours from sunrise to sunset from all stations in the radiolocation system of which the station in question is a part; that is, the primary service area of the station coincides with the primary service area of the system. The normal minimum geographical separation between stations of different licensees shall be at least 580 km. (360 mi.) when the stations are operated on the same frequency or on different frequencies separated by less than 3 kHz. Where geographical separation of less than 580 km. (360 mi.) is desired under these circumstances it must be shown that the desired separation will result in protection ratio of at least 20 decibels throughout the daytime primary service area of other stations. Applications in this band are placed on public notice in accordance with § 1.962 of this chapter. Where the number of applicants requesting authority to serve an area exceeds the number of frequencies available for assignment; or where it appears that fewer applicants or licensees than the number before it should be given authority to serve a particular area; or where it appears that an applicant, either directly or indirectly, seeks to use more than 25 kHz of the available spectrum space in this band, the applications may be designated for hearing.

(8) Frequencies in this band may only be assigned to radiolocation stations which are also assigned frequencies in the 1605–1800 kHz band, provided the use of frequencies in this band is necessary for the proper functioning of the

particular radiolocation system. Operations in this band are on a secondary basis to stations operating in accordance with the Commission's table of frequency allocations contained in § 2.106 of this chapter.

(9) This band is allocated to the Radiolocation Service on a secondary basis to other fixed or mobile services and must accept any harmful interference that may be experienced from such services or from the industrial, scientific, and medical (ISM) equipment operating in accordance with part 18 of this chapter. In the 2483.5–2500 MHz band, no applications for new or modification to existing stations to increase the number of transmitters will be accepted. Existing licensees as of July 25, 1985, or on a subsequent date following as a result of submitting an application for license on or before July 25, 1985, are grandfathered and their operation is co-primary with the Radiodetermination Satellite Service.

(10) Speed measuring devices will not be authorized in this band.

(11) This frequency band is shared with and is on a secondary basis to the Maritime Radionavigation Stations (part 80) and to the Government Radiolocation Service.

(12) This frequency is shared with and is on a secondary basis to the Government Radiolocation Service.

(13) Operations in this band are limited to survey operations using transmitters with a peak power not to exceed 5 watts into the antenna.

(14) This frequency band is shared with and is on a secondary basis to the Aeronautical Radionavigation Service (part 87) and to the Government Radiolocation Service.

(15) The non-Government Radiolocation Service in this band is secondary to the Maritime Radionavigation Stations (part 80), the Aeronautical Radionavigation Service (part 87) and the Government Radiolocation Service.

(16) This frequency band is shared with and is on a secondary basis to the Maritime Radionavigation Stations (part 80) and the Government Meteorological Aids Service.

(17) Operation in this frequency band is on a secondary basis to airborne Doppler radars at 8800 MHz.

(18) Radiolocation installations will be coordinated with the Government Meteorological Aids Service, and insofar as practicable, will be adjusted to meet the needs of that service.

(19) Operations in this band are on a secondary basis to the Amateur Radio Service (part 97). Pulsed emissions are prohibited.

(20) This band is restricted to radiolocation systems using type N0N emission with a power not to exceed 40 watts into the antenna.

(21) Non-Government radiolocation stations in the band are secondary to the Government Radiolocation Service, the Amateur Radio Service and the Amateur-Satellite Service. Pulse-ranging radiolocation stations in this band may be authorized along the shorelines of Alaska and the contiguous 48 states. Radiolocation stations using spread spectrum techniques may be authorized in the band 420–435 MHz for operation within the contiguous 48 states and Alaska. Also, stations using spread spectrum techniques shall be limited to a maximum output power of 50 watts, shall be subject to the applicable technical standards in § 90.209 until such time as more definitive standards are adopted by the Commission and shall identify in accordance with § 90.425(c)(3). Authorizations will be granted on a case-by-case basis; however, operations proposed to be located within the zones set forth in § 90.177(e) should not expect to be accommodated.

(22) For frequencies 2455, 10,525, and 24,125 MHz unmodulated continuous wave (NON) emission only shall be employed and a frequency stability of at least 0.2 percent shall be maintained. Such stations shall be exempt from the requirements of §§ 90.403(c) and (f) and 90.429.

(23) Devices designed to operate as field disturbance sensors on frequencies between 2450 and 2500 MHz with a field strength equal to or less than 50,000 microvolts per meter at 30 meters, on a fundamental frequency, will not be licensed or type accepted for use under this part. Such equipment must comply with the requirements for field disturbance sensors as set forth in part 15 of this chapter.

(24) Devices designed to operate as field disturbance sensors on fre-

quencies between 10,500 and 10,550 MHz and between 24,050 and 24,250 MHz, with field strength equal to or less than 250,000 microvolts per meter at 30 meters, on the fundamental frequency, will not be licensed or type accepted for use under this part. Such equipment must comply with the requirements for field disturbance sensors as set forth in part 15 of this chapter.

(25) Station assignments on frequencies in this band will be made subject to the conditions that the maximum output power shall not exceed 375 watts and the maximum authorized bandwidth shall not exceed 1.0 kHz.

(26) Each frequency assignment in this band is on an exclusive basis within the primary service area to which assigned. The primary service area is the area where the signal intensities are adequate for radiolocation purposes from all stations in the radiolocation system of which the station in question is a part; that is, the primary service area of the station coincides with the primary service area of the system. The normal minimum geographical separation between stations of different licensees shall be at least 1931 km (1200 miles) when the stations are operated on the same frequency or on different frequencies separated by less than 1.0 kHz. Where geographical separation of less than 1931 km (1200 miles) is requested under these circumstances, it must be shown that the desired separation will result in a protection ratio of at least 20 decibels throughout the primary service area of other stations.

(27) Notwithstanding the bandwidth limitations otherwise set forth in this section of the rules, wideband systems desiring to operate in this band may use such bandwidth as is necessary for proper operation of the system provided that the field strength does not exceed 120 microvolts per meter per square root Hertz ($120 \text{ uv/m/Hz}^{1/2}$) at 1.6 km (1 mile). Such wideband operations shall be authorized on a secondary basis to stations operating within otherwise applicable technical standards. Applications for wideband systems in this band will be accepted beginning December 15, 1985.

(28) Since the 1605–1705 kHz band has been reallocated for AM broadcasting,

no new assignments in the 1605–1705 kHz portion of this band shall be made after September 30, 1985.

(29) Beginning July 1, 1987, licensees of existing systems authorized frequencies in the 1605–1705 kHz portion of this band may request modification of their authorizations to change frequencies to the 1900–2000 kHz band.

(30) Until July 1, 1988, this band will be available only for licensees of existing systems operating in the 1605–1705 kHz portion of the 1605–1715 kHz band requesting modification of their authorizations to change frequencies to this band and for licensees of wideband systems. On July 1, 1988, requests for new station authorizations in this band will be accepted and, if necessary, will be subject to the random selection procedures outlined in §1.972 of the Commission's Rules.

(31) This frequency band is shared with and is on secondary basis to the Fixed-Satellite Service and to the Government's Radiolocation, Space Research and Earth Exploration-Satellite Services. After January 1, 2000, the Government's Space Research and Earth Exploration-Satellite Services shall operate on a co-equal secondary basis with the non-Government Radiolocation Service, except that grandfathered space stations in the Tracking and Data Relay Satellite System shall continue to be protected from harmful interference.

(d) *Other additional frequencies available.* Radiolocation stations in this service may be authorized, on request, to use frequencies allocated exclusively to Federal Government stations, in those instances where the Commission finds, after consultation with the appropriate Government agency or agencies, that such assignment is necessary or required for coordination with Government activities.

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §90.103, see the List of CFR Sections Affected in the Finding Aids section of this volume.

Subpart G—Applications and Authorizations

§90.111 Scope.

This subpart contains the procedures and requirements for the submission or filing of applications for authority to operate radio facilities under this part. The procedures described as those utilized by the Commission after receiving filed applications.

[51 FR 14996, Apr. 22, 1986]

§90.113 Station authorization required.

No radio transmitter shall be operated in the services governed by this part except under and in accordance with a proper authorization granted by the Commission.

§90.115 Foreign government and alien eligibility.

(a) No station authorization in the radio services governed by this part shall be granted to or held by a foreign government or its representative.

(b) No station authorization in the radio services governed by this part shall be granted to or held by an entity providing or seeking to provide commercial mobile radio services (except such entities meeting the requirements of §20.9(c) of this chapter) if such entity is:

(1) An alien or the representative of any alien;

(2) A corporation organized under the laws of any foreign government;

(3) A corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country;

(4) A corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds

that the public interest will be served by the refusal or revocation of such license.

[59 FR 59957, Nov. 21, 1994, as amended at 61 FR 55581, Oct. 28, 1996]

§ 90.117 Applications for radio station or radio system authorizations.

Persons desiring a radio station or radio system authorization must first submit the appropriate application(s). Prescribed application forms are listed in § 90.119. The Forms may be obtained from the Washington, DC office of the Commission, its Gettysburg, PA office, or from any of its engineering field offices. (See § 90.145 for information regarding special temporary authorizations.) Applicants for new stations comprising a land mobile radio system as defined in § 90.7 of this part, or applicants modifying or renewing a station that is a part of a system, may file an application for a system authorization.

[47 FR 57051, Dec. 22, 1982]

§ 90.119 Application forms.

The following application forms shall be used—

(a) Form 600 shall be used to apply:

(1) For new base, fixed, or mobile station authorizations governed by this part.

(2) For system authorizations, where the system meets the requirements of § 90.117.

(i) Application for a radio system may be submitted on a single Form 600.

(ii) If the control station(s) will operate on the same frequency as the mobile station, and if the height of the control station(s) antenna(s) will not exceed 6.1 meters (20 feet) above ground or an existing man-made structure (other than an antenna structure), there is no limit on the number of such stations which may be authorized. Appropriate items on Form 600 shall be completed showing the frequency, the station class, the total number of control stations, the emission, and the output power of the highest powered control station. Applicants for all control stations in the 470–512 MHz band must furnish the information requested in the relevant items in Form 600.

(3) For modification or for modification and renewal of an existing authorization. See § 90.135.

(4) For the Commission's consent to the assignment of an authorization to another person or entity, except for authorization to provide commercial mobile radio service. In addition, the application shall be accompanied by a letter from the assignor setting forth his or her desire to assign all right, title, and interest in and to such authorization, stating the call sign and location of the station, and stating that the assignor will submit his or her current station authorization for cancellation upon completion of the assignment. Form 1046 may be used in lieu of this letter.

(5) For reinstatement of an expired license. See also paragraphs (b)(1) and (e) of this section.

(b) Form 405–A shall be used to:

(1) Apply for license reinstatement or renewal if the reinstatement or renewal does not involve the modification of the station or system license.

(2) Notify the Commission of a change in the licensee's name or mailing address that occurs during the license term. See § 90.135(b).

(3) Notify the Commission that the licensee has discontinued station operation and wishes to cancel the license. See § 90.157.

(c) Form 490 shall be used whenever it is proposed that a licensee for a commercial mobile radio service in this part change, as by transfer of stock ownership, the control of a corporate licensee or for the Commission's consent to an assignment of an authorization to another person or entity.

(d) Form 572, Temporary Permit to Operate a Part 90 Radio Station, should be properly executed if the applicant is eligible and desires to operate his or her station pending the processing of his or her formal application. See also §§ 90.159, and 90.657.

(e) Form 574–R shall be used to apply for renewal of an existing authorization and may be used to apply for reinstatement of an expired license, if the renewal or reinstatement does not involve the modification of the station or system license. (Form 574–R is generated by the Commission and mailed

to the licensee prior to the expiration of the license term.)

[59 FR 59957, Nov. 21, 1994]

§ 90.121 Canadian registration.

Form 410 shall be filed by Canadian licensees desiring to operate in the United States under the terms of Article 2 and 3 of the Convention between the United States and Canada concerning operation of Certain Radio Equipment or Stations (which entered into force May 15, 1952). This form may be obtained from the Department of Communications, Ottawa, Canada. That department should also be consulted by U.S. licensees desiring to operate in Canada.

§ 90.123 Full disclosures.

(a) Each application shall contain full and complete disclosures with regard to the real party or parties in interest and as to all matters required to be disclosed by the application forms.

(b) Each application shall be clear and complete in itself without cross reference to information previously filed. An application for modification of an existing station must show in precise detail all particulars of the desired operation, including those not affected by the modification.

(c) Each application for digital voice emission shall only be made with the understanding that the applicant is responsible to disclose current encoding information to an FCC official at any time after station authorization. Disclosure shall be only upon request of the FCC official, and only for enforcement purposes. All authorizations for digital voice systems are issued subject to this requirement.

[43 FR 54791, Nov. 22, 1978, as amended at 47 FR 15340, Apr. 9, 1982]

§ 90.125 Who may sign applications.

See part 1 of this chapter, § 1.913, for practices and procedures governing signatures on license applications.

[58 FR 21407, Apr. 21, 1993]

§ 90.127 Submission and filing of applications.

(a) All applications for private land mobile licenses that require both frequency coordination and fees as set

forth at part 1, subpart G of this chapter shall first be sent to a certified coordinator for the radio pool concerned as specified in §§ 90.20(c)(2) and 90.35(b)(2). After the appropriate coordination and attachment of the statutory fee, such applications shall be forwarded to the appropriate address in accordance with § 0.401(b) of the rules. A list of the certified frequency coordinators may be obtained from the Federal Communications Commission, Gettysburg, PA 17326.

(1) All applications for private land mobile licenses that require frequency coordination but not a fee shall be sent to a certified coordinator for the radio pool concerned as specified in §§ 90.20(c)(2) and 90.35(b)(2). After the appropriate coordination, such applications shall be forwarded to the Federal Communications Commission, Gettysburg, PA 17326.

(2) All applications for private land mobile licenses that require a fee but not frequency coordination shall be sent to the appropriate address in accordance with § 0.401(b) of the rules.

(3) All applications for private land mobile licenses that do not require either frequency coordination or a fee shall be sent to the Federal Communications Commission, Gettysburg, PA 17326.

(b) Unless otherwise specified, an application should be filed at least 60 days prior to the desired date of Commission action. Applications for renewal should be filed no more than 90 days nor less than 30 days prior to the end of the license term. When timely and sufficient application for renewal of the license has been made, the license shall not expire until Commission action on the application has been completed. Application for license reinstatement must be filed no later than thirty (30) days after the expiration date of the license. See § 1.4 of this chapter.

(c) Each application shall limit its request for authorized mobile transmitters and paging receivers to:

(1) Mobile transmitters and paging receivers that will be installed and operated immediately after authorization issuance.

(2) Mobile transmitters and paging receivers for which purchase orders

have already been signed and which will be in use within eight months of the authorization date.

(d) Failure on the part of the applicant to provide all information required by the application form or to supply the necessary exhibits or supplementary statements may constitute a defect in the application.

(e) All applications for modification of license and renewal of license must include the number of mobile transmitters and paging receivers in use on the licensed facilities.

[43 FR 54791, Nov. 22, 1978, as amended at 43 FR 59071, Dec. 19, 1978; 44 FR 27995, May 14, 1979; 47 FR 41044, Sept. 16, 1982; 51 FR 14996, Apr. 22, 1986; 52 FR 10231, Mar. 31, 1987; 54 FR 39739, Sept. 28, 1989; 56 FR 65858, Dec. 19, 1991; 57 FR 48739, Oct. 28, 1992; 62 FR 18924, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, § 90.127 was amended by revising the first sentence of paragraph (a) introductory text and the first sentence of paragraph (a)(1), effective Oct. 17, 1997.

§ 90.129 Supplemental information to be routinely submitted with applications.

Each application received by the Commission must be accompanied by the applicable information listed below:

(a) Evidence of frequency coordination as required by § 90.175.

(b) Description of any equipment proposed to be used if it does not appear on the Commission's current Radio Equipment List, Equipment Acceptable for Licensing, and designated for use under this part.

(c) A functional system diagram and a detailed description of the manner in which the interrelated stations will operate, if the station is part of a system involving two or more stations at different fixed locations.

(d) Applicants proposing to share their authorized transmitters pursuant to § 90.179 shall so indicate in their application.

(e) Applicants proposing to construct a radio station in the vicinity of radio astronomy observatories in West Virginia or in the vicinity of a radio receiving zone in Colorado must submit the statements prescribed by § 90.177.

(f) Statements required in connection with developmental operation, as specified in § 90.505.

(g) The environmental assessment required by §§ 1.1307 and 1.1311 of the rules, if applicable.

(h) Requests for authorization to communicate with foreign stations in accordance with § 90.20(b) or § 90.417;

(i) Showings required in connection with the use of frequencies as specified in subpart S.

(j) Any other statements or other data specifically required under special circumstances which are set forth in the applicable subpart of this part, by the particular form on which the application is filed or upon request by the Commission.

(k) If the applicant proposes to use a multiple-licensed transmitter, he must provide the name of the owner and the names and call signs of any other licensees of that transmitter.

(l) Applicants for new land stations to be interconnected with the public switched telephone network must indicate on their applications that their stations will be interconnected.

(m) Applicants requesting licenses to operate on frequencies pursuant to § 90.20(d)(6) must submit disaster communications plans containing the following information:

(1) A system network/system use diagram including a showing of emergency power and methods of deployment to all parts of the State or insular area;

(2) A designation of the responsible governmental authority within the State or insular area who will be the controlling agency for the licensee;

(3) A schedule of proposed drills and/or exercises by the participants;

(4) The number of frequencies in each band, and the type of emission required by the applicant;

(5) The distances expected to be covered within that State or insular area;

(6) The adjacent states and insular areas expected to be communicated with during a regional disaster or emergency;

(7) The point of contact for emergencies involving more than one State or insular area;

(8) The common frequency band(s) and number of frequencies in each band required for interstate communication,

and the point(s) of contact for these adjacent States or insular areas;

(9) The format and emission parameters of radio teletype transmissions to be used for interstate communications.

(n) All applications for renewal of base/mobile station licenses by licensees who also operate wildlife tracking telemetry transmitters, as described in § 90.20(f)(7), must include a statement detailing the number of units in service, by frequency, on Public Safety Pool frequencies at the time the renewal application is filed.

(o) Applicants requesting licenses to operate on frequencies pursuant to § 90.35(c)(1) must submit communications plans containing the following information:

(1) A description of the communication requirement sufficient to demonstrate that no alternative to the link is appropriate and that there is no reasonable way to abbreviate the link;

(2) The frequency bands and the number of frequencies necessary for the link(s);

(3) The name and phone number of the person(s) responsible for ceasing operations of the licensee's stations in the event of interference; and,

(4) Where the link(s) provides a standby backup circuit for another communications circuit, a brief description of the supported circuit and its vulnerability to disruption.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307)

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.129, see the List of CFR Sections Affected in the Finding Aids section of this volume.

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, § 90.129 was amended by revising paragraphs (h) and (n) and the introductory text of paragraphs (m) and (o), effective Oct. 17, 1997.

§ 90.131 Amendment or dismissal of applications.

This rule governs all applications relating to radio services in this part, including applications filed by entities meeting the requirements of § 20.9(c) of this chapter, except applications concerning facilities used to provide commercial mobile radio services, which are governed by § 90.161.

(a) Any application, except for mutually exclusive applications or those against which a petition to deny has been filed, may be amended as a matter of right at any time prior to the time the application is granted or designated for hearing. Each amendment to an application shall be signed and submitted in the same manner as required for the original application. The procedures for amending applications mutually exclusive under this part, applications against which a petition to deny has been filed, and applications designated for hearing are set forth in § 1.918.

(b) Any application may, upon written request signed by the applicant or his attorney, be dismissed without prejudice as a matter of right prior to the time the application is granted or designated for hearing.

[43 FR 54791, Nov. 22, 1978, as amended at 59 FR 59958, Nov. 21, 1994]

§ 90.135 Modification of license.

(a) The following changes in authorized stations require an application for modification of license:

(1) Change in frequency.

(2) Change in the type of emission, except under the conditions specified in paragraph (b)(5) of this section.

(3) Change in power from that authorized.

(4) Change in antenna height from that authorized.

(5) Change in the authorized location or number of base stations, fixed, control or, for systems operating on non-exclusive assignments in the 470–512 MHz, 800 MHz or 900 MHz bands, a change in the number of mobile transmitters, or a change in the area of mobile operations from that authorized.

(6) Change in the class of a land station, including changing from multiple licensed to cooperative use, and from shared to unshared use.

(7) Any change in ownership, control, or corporate structure.

(b) The following changes in authorized stations do not require an application for modification of license.

(1) Change in mailing address of licensee.

(2) Change of name only of licensee, without changes in ownership, control, or corporate structure.

(3) Change in the number and location of station control points or of control stations operating below 470 or above 800 MHz meeting the requirements of § 90.119(a)(2)(ii).

(4) Change in the number of mobile units operated by Radiolocation Service licensees.

(5) Change in the type of emission when:

(i) Operation is in the 150–174 MHz or 421–512 MHz bands; and

(ii) The modification will be for a narrower emission than specified in the current authorization.

(6) Any other changes not listed in paragraph (a) of this section.

(c) Unless specifically exempted in § 90.175, requests for modifications listed in paragraph (a) of this section must be submitted on Form 600 to the applicable frequency coordinator.

(d) In case of a change listed in paragraphs (b)(1), (b)(2), or (b)(5) of this section, the licensee must notify the Commission immediately. Notification may be by Form 405-A or by letter. The letter must contain the name and address of the licensee as they appear in the Commission's records, the new name or address, the call signs and classes of all radio stations authorized to the licensee under this part and the radio service in which each station is authorized. The completed and signed Form 405-A or the letter must be sent to: Federal Communication Commission, Gettysburg, PA 17326. Licensees whose licenses are due for renewal and who have received the renewal Form 574-R in the mail from the Commission must use the appropriate boxes on that form to notify the Commission of a change listed in paragraphs (b)(1), (b)(2), or (b)(5) of this section.

(e) In the case of a change listed in paragraphs (b)(3), (b)(4), and (b)(6) of this section, the licensee must notify the Commission within 30 days of the change. The notice may be filed on FCC Form 574 or may be contained in a letter specifying the nature of the change, the name and address of the licensee as appearing on Commission records, and the call sign, class, and radio service of the station. The notice must be sent to: Federal Communications Commission, Gettysburg, PA 17326.

(f) Any change that requires a fee as set forth at part 1, subpart G of this chapter must be filed in accordance with § 1.912 (b) or § 1.912 (b)(2) of the rules.

[51 FR 14997, Apr. 22, 1986, as amended at 51 FR 36014, Oct. 8, 1986; 52 FR 10232, Mar. 31, 1987; 54 FR 38680, Sept. 20, 1989; 57 FR 48739, Oct. 28, 1992; 59 FR 59958, Nov. 21, 1994; 62 FR 2038, Jan. 15, 1997]

§ 90.137 Applications for operation at temporary locations.

(a) An application for authority to operate a base or a fixed transmitter at temporary locations shall be filed in accordance with the following:

(1) When one or more individual transmitters are to be operated by a licensee as a base station or as a fixed station at unspecified or temporary locations for indeterminate periods, such transmitters may be considered to comprise a single station intended to be operated at temporary locations.

(2) The application must specify the general geographic area within which the operation will be confined. The area may be specified as a city, a county or counties, a state or states or other definable geographic area such as a specified radius around a particular city or known geographic site.

(3) Applications for operation at temporary locations exceeding 180 days must be accompanied by evidence of frequency coordination, except that applications for operation at temporary locations exceeding 180 days by applicants using 220–222 MHz spectrum for geophysical telemetry operations need not be accompanied by evidence of frequency coordination.

(b) When any unit or units of a base station or fixed station which are authorized for operation at temporary locations actually remain or are intended to remain at the same location for more than 1 year, an application for a separate authorization specifying the fixed location shall be made as soon as possible, but not later than 30 days after the expiration of the 1-year period.

[43 FR 54791, Nov. 22, 1978, as amended at 45 FR 63862, Sept. 26, 1980; 51 FR 14997, Apr. 22, 1986; 58 FR 44956, Aug. 25, 1993; 62 FR 15992, Apr. 3, 1997]

§ 90.138 Applications for itinerant frequencies.

An application for authority to conduct an itinerant operation in the Industrial/Business Pool must be restricted to use of itinerant frequencies or other frequencies not designated for permanent use and need not be accompanied by evidence of frequency coordination. Users should be aware, however, that no protection is provided from interference from other itinerant operations.

[62 FR 18924, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, § 90.138 was revised, effective Oct. 17, 1997.

§ 90.139 Commission processing of applications.

(a) Applications received for filing are given a file number. The assignment of a file number to an application is for administrative convenience and does not indicate the acceptance of the application for filing and processing.

(b) Applications which are incomplete with respect to answers, supplementary statements, execution, or other matters of a formal character shall be deemed defective and may be dismissed. In addition, if an applicant is requested to file any additional documents or information not included in the prescribed application form, failure to comply with such request will render the application defective and it may be dismissed. Applications will also be deemed to be defective and be dismissed in the following cases:

(1) Statutory disqualification of applicant;

(2) Proposed use or purpose of station would be unlawful;

(3) Requested frequency is not allocated for assignment for the service proposed.

(c) Applications which are not in accordance with the provisions of this chapter, or other requirements of the Commission, will be considered defective and may be dismissed unless accompanied by a request in accordance with § 90.151 of this part.

[43 FR 54791, Nov. 22, 1978, as amended at 51 FR 14997, Apr. 22, 1986]

§ 90.141 Resubmitted applications.

Any application received by the Commission for frequencies below 470 MHz which has been returned by the Commission to the applicant for correction will be processed in its original position in the processing line if it is resubmitted and received by the Commission within 60 days from the date on which it was returned to the applicant. Otherwise it will be treated as a new application for the purpose of processing considerations. An application received by the Commission for frequencies above 470 MHz which has been returned by the Commission to the applicant will be processed in its original position in the processing line if it is resubmitted and received by the Commission within 30 days (45 days outside the continental United States) from the date on which it was returned to the applicant. Otherwise it will be treated as a new application for the purpose of processing considerations.

[51 FR 14997, Apr. 22, 1986]

§ 90.143 Grants of applications.

(a) The Commission will grant an application for a station authorization without a hearing if it is in proper form, and conforms with all rule requirements, and would serve the public interest, convenience or necessity.

(b) All applications in pending status will be processed in the order in which the application acceptable for filing was received by the Commission; provided, however, that if there are more applications than can be accommodated on available frequencies, the Commission may grant the applications pursuant to the system of random selection prescribed in § 1.972 of this chapter.

(c) The Commission may grant any application in part, or add privileges, terms or conditions not requested. When such action is taken without a hearing, the applicant may accept the authorization as granted, or may return it to the Commission along with a written request for a hearing. Any such request for hearing must be made within 30 days from the date of the grant, or from its effective date, if a later date is specified. Upon receipt of a request for hearing, the Commission will

vacate the grant and designate the application for hearing in the usual manner.

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 27207, June 13, 1983]

§ 90.145 Special temporary authority.

(a) In circumstances requiring the temporary use of radio facilities, the Commission may issue special temporary authority for new or modified operations. A request for special temporary authority may be made in letter form signed in accordance with § 90.125 of this part. It should be submitted, in duplicate, at least 10 days prior to the date of the proposed operation. However, in cases of emergency involving danger to life or property, or due to damage to equipment, the request may be made by telephone, telegraph or facsimile transmission under the condition that a letter request is submitted within the following 10 days. All requests for special temporary authority shall be clear and complete within themselves and shall not rely on any pending application.

(b) Every request for special temporary authority should contain the following information:

- (1) Name and address of the applicant;
- (2) Need for special action, including a description of any emergency or damage of equipment;
- (3) Type of operation to be conducted (such as field test, dispatching etc.);
- (4) Purpose of operation;
- (5) Times and dates of operation;
- (6) Class of station and name of radio service or radio pool;
- (7) Location, including geographical coordinates if known, of transmitter and/or mobile area of operations;
- (8) Number of fixed transmitters and number of mobile units;
- (9) Operating frequency;
- (10) Output power of the transmitter;
- (11) Type of emission;
- (12) Description of antenna, including height above ground and power gain;
- (13) Statement of eligibility for a radio service or radio pool under this part.

(c) Requests for special temporary authority to operate as a private mobile radio service provider for periods exceeding 180 days require evidence of

frequency coordination. Requests for shorter periods do not require coordination and, if granted will be authorized on a secondary, non-interference basis.

(d) A request for special temporary authority to operate a commercial mobile radio facility under this part may be granted without being listed in a Public Notice, or prior to thirty (30) days after such listing, if:

(1) The STA is to be valid for thirty (30) days or less and the applicant does not plan to file an application for regular authorization of the subject operation;

(2) The STA is to be valid for sixty (60) days or less, pending the filing of an application for regular authorization of the subject operation;

(3) The STA is to allow interim operation to facilitate completion of authorized construction or to provide substantially the same service as previously authorized; or

(4) The STA is made upon a finding that there are extraordinary circumstances requiring operation in the public interest and that delay in the institution of such service would seriously prejudice the public interest.

(e) The Commission may grant STAs to operate a commercial mobile radio facility for a period not to exceed one hundred eighty (180) days under the provisions of Section 309(f) of the Communications Act of 1934, as amended, 47 U.S.C. 309(f), if extraordinary circumstances so require, and pending the filing of an application for regular operation. The Commission may grant extensions for an additional period of up to one hundred eighty (180) days, but the applicant must show that extraordinary circumstances warrant such an extension.

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 11717, Mar. 21, 1983; 51 FR 14997, Apr. 22, 1986; 59 FR 59958, Nov. 21, 1994; 62 FR 18924, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, § 90.145 was amended by revising paragraphs (b)(6) and (b)(13), effective Oct. 17, 1997.

§ 90.147 Mailing address furnished by licensee.

Each application shall set forth and each licensee shall furnish the Commission with an address in the United States to be used by the Commission in serving documents or directing correspondence to that licensee. Unless any licensee advises the Commission to the contrary, the address contained in the licensee's most recent application will be used by the Commission for this purpose.

§ 90.149 License term.

(a) Licenses for stations authorized under this part will be issued for a term not to exceed five (5) years from the date of the original issuance, modification, or renewal, except that the license term for stations licensed as commercial mobile radio service on 220–222 MHz, 929–930 MHz paging, Industrial/Business Pool, and SMR frequencies shall be ten (10) years. Licensees shall have an additional thirty (30) days after the expiration of the license term to apply for reinstatement of expired licenses.

(b) If no application for reinstatement has been filed as specified in this part, the authorization shall be deemed to have been automatically cancelled on the date specified on the authorization.

(c) Authorizations for stations engaged in developmental operation under subpart Q of this part will be issued upon a temporary basis for a specific period of time, but in no event to extend beyond 1 year from date of original issuance, modification or renewal.

(d) Nationwide authorizations under subpart T of this part will be issued for a term not to exceed ten years from the date of the original issuance, modification or renewal.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 36376, Sept. 17, 1984; 56 FR 19602, Apr. 29, 1991; 56 FR 65858, Dec. 19, 1991; 59 FR 59958, Nov. 21, 1994; 62 FR 18924, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, § 90.129 was amended by revising paragraph (a), effective Oct. 17, 1997.

§ 90.151 Requests for waiver.

(a) Requests for waiver of the rules in this part shall state the nature of the waiver or exception desired, and set forth reasons in support thereof including a showing that unique circumstances are involved and that there is no reasonable alternative solution within existing rules. When related to a specific application the submission and filing procedures of § 90.127 also apply.

(b) Applications may be dismissed if the accompanying petition for waiver of the rules does not set forth reasons which, sufficient if true, would justify a waiver or exception.

(c) Applicants requiring expeditious processing of their request for waiver, shall, pursuant to § 1.931 of this chapter, clearly caption both their request for waiver and the envelope containing it with the words "WAIVER—TIMELY ACTION REQUESTED."

(d) Requests for waiver of the rules not related to a specific application shall be submitted to the Federal Communications Commission, Gettysburg, PA 17326. (Waiver requests associated with and attached to specific applications that require a fee as set forth at part 1, subpart G of this chapter must be filed in accordance with § 0.401(b) of the rules. See also § 0.482 of the rules.)

(Sec. 4(i), Communications Act of 1934, as amended, 47 U.S.C. 154(i), and the authority delegated to the Managing Director by § 0.231 of the Commission's Rules, 47 CFR 0.231)

[49 FR 20292, May 14, 1984, as amended at 51 FR 14997, Apr. 22, 1986; 52 FR 10232, Mar. 11, 1987]

§ 90.153 Transfer or assignment of station authorization.

A station authorization and the rights it grants shall not be transferred, assigned, or in any manner disposed of to any person, unless the Commission shall, after obtaining full information, decide that the transfer, assignment, or disposal is in the public interest, convenience or necessity and give its consent in writing. An applicant for voluntary transfer of control or assignment under this section where the subject license was acquired by the transferor or assignor through a system of random selection shall, together

with its application for transfer of control or assignment, file with the Commission the associated contracts for sale, option agreements, management agreements, or other documents disclosing the total consideration that the applicant would receive in return for the transfer or assignment of its license. This information should include not only a monetary purchase price, but also any future, contingent, in-kind, or other consideration (e.g., management or consulting contracts either with or without an option to purchase; below-market financing). The assignee is responsible for ascertaining that the station facilities are and will remain in compliance with the terms and conditions of the authorization to be assigned.

(a) *Application required.* The assignor or transferor of a commercial mobile radio license under this part must file an application for approval of assignment or transfer of control (Commission Form 490). In the case of involuntary assignment, such application must be filed no later than thirty (30) days after the event causing the assignment. The assignee or transferee must file a report qualifying it as a commercial mobile radio provider (Commission Form 430) unless a current report is already on file with the Commission.

(b) *Notification of completion.* Assignments and transfers of control of commercial mobile radio licenses must be completed within sixty (60) days of Commission approval. The assignee or transferee must notify the Commission by letter of the date of completion of the assignment or transfer of control. If an assignment or transfer of control is not completed within this time, the assignor or transferor must so notify the Commission by letter, and the assignee or transferee must submit the authorization(s) to the Commission for cancellation or request an extension of time to complete the assignment or transfer of control. If the assignment or transfer of control is not completed, the authorization(s) remain with the assignor or transferor.

(c) *Partial assignment of authorization.* If the authorization for some, but not all, of the facilities of a commercial mobile radio station is assigned to an-

other party, voluntarily or involuntarily, such action is a partial assignment of authorization.

(1) To request Commission approval of a partial assignment of authorization, the following must be filed in addition to the forms required by paragraph (a) of this section:

(i) The assignor must notify the Commission (Commission Form 600) of the facilities to be deleted from its authorization upon completion of the assignment.

(ii) The assignee must apply for authority (Commission Form 600) to operate a new station including the facilities for which authorization is assigned, or to modify the assignee's existing station to include the facilities for which authorization was assigned.

(2) Partial assignments must be completed within sixty (60) days of Commission approval. If an approved partial assignment is not completed within this time, the assignor must notify the Commission (Commission Form 600), and the assignee must submit the authorization(s) to the Commission for cancellation or request an extension of time to complete the assignment. If the assignment is not completed, the authorization(s) remain with the assignor.

(d) *Limitations.* The Commission may deny applications for assignment of authorization or consent to transfer of control of a commercial mobile radio license if:

(1) The Commission is unable to make the public interest determinations required under the Communications Act with respect to both parties to the assignment or transfer; or

(2) The authorization was obtained for the principal purpose of speculation or profitable resale, rather than provision of commercial mobile radio services to the public.

[43 FR 54791, Nov. 22, 1978, as amended at 59 FR 9101, Feb. 25, 1994; 59 FR 59958, Nov. 21, 1994]

§ 90.155 Time in which station must be placed in operation.

(a) All stations authorized under this part, except as provided in paragraphs (b) and (d) of this section and in §§ 90.629, 90.631(f), 90.665, and 90.685, must be placed in operation within

eight (8) months from the date of grant or the authorization cancels automatically and must be returned to the Commission.

(b) For local government entities only, a period longer than eight months for placing a station in operation may be authorized by the Commission on a case-by-case basis, where the applicant submits a specific schedule for the completion of each portion of the entire system, along with a showing that the system has been approved and funded for implementation in accordance with that schedule. See also §§ 90.631 and 90.633.

(c) For purposes of this section, a base station is not considered to be placed in operation unless at least one associated mobile station is also placed in operation. See also §§ 90.633(d) and 90.631(f).

(d) Multilateration LMS systems authorized in accordance with § 90.353 must be constructed and placed in operation within twelve (12) months from the date of grant or the authorization cancels automatically and must be returned to the Commission. MTA-licensed multilateration LMS systems will be considered constructed and placed in operation if such systems construct a sufficient number of base stations that utilize multilateration technology (see paragraph (e) of this section) to provide multilateration location service to a substantial portion of at least one BTA in the MTA.

(e) A multilateration LMS station will be considered constructed and placed in operation if it is built in accordance with its authorized parameters and is regularly interacting with one or more other stations to provide location service, using multilateration technology, to one or more mobile units. Specifically, LMS multilateration stations will only be considered constructed and placed in operation if they are part of a system that can interrogate a mobile, receive the response at 3 or more sites, compute the location from the time of arrival of the responses and transmit the

location either back to the mobile or to a subscriber's fixed site.

[45 FR 81208, Dec. 10, 1980, as amended at 47 FR 41044, Sept. 16, 1982; 48 FR 51927, Nov. 15, 1983; 54 FR 4030, Jan. 27, 1989; 56 FR 65859, Dec. 19, 1991; 60 FR 15252, Mar. 23, 1995; 61 FR 6155, Feb. 16, 1996]

§ 90.157 Discontinuance of station operation.

(a) The license for a station shall cancel automatically upon permanent discontinuance of operations and the licensee shall forward the station license to the Commission. Alternatively, the licensee may notify the Commission of the discontinuance of operations of a station by checking the appropriate box on Form 574-R or Form 405-A and requesting license cancellation. Notification of discontinued operation or cancellation shall be sent to: Federal Communications Commission, Gettysburg, PA 17326.

(b) For the purposes of this section, any station which has not operated for 1 year or more is considered to have been permanently discontinued.

[48 FR 36106, Aug. 9, 1983, as amended at 54 FR 38680, Sept. 20, 1989; 56 FR 65859, Dec. 19, 1991]

§ 90.159 Temporary and conditional permits.

(a) An applicant for a license under this part (other than a commercial mobile radio license) utilizing an already licensed facility may operate the radio station(s) for a period of up to one hundred eighty (180) days under a temporary permit evidenced by a properly executed temporary license certificate (Form 572) after submitting or filing a formal application for station license in accordance with § 90.127, provided that all the antennas employed by control stations are 6.1 meters (20 feet) or less above ground or 6.1 meters (20 feet) or less above a man-made structure other than an antenna tower to which it is affixed. When required by § 90.175, applications must be accompanied by evidence of frequency coordination. The temporary operation of stations, other than mobile stations within the Canadian coordination zone is limited

to stations with a maximum of 5 watts effective radiated power and a maximum antenna height of 6.1 meters (20 ft) above average terrain.

(b) An applicant proposing to operate a new land mobile radio station or modify an existing station below 470 MHz or in the one-way paging 929–930 MHz band (other than a commercial mobile radio service applicant or licensee on these bands) that is required to submit a frequency recommendation pursuant to paragraphs (b) through (h) of § 90.175 may operate the proposed station during the pendency of its application for a period of up to one hundred eighty (180) days under a conditional permit upon the filing of a properly completed formal application that complies with § 90.127 if the application is accompanied by evidence of frequency coordination in accordance with § 90.175 and provided that the following conditions are satisfied:

(1) For applicants proposing to operate below 470 MHz, that the proposed station location is south of Line A or west of Line C as defined in § 90.7; for applicants in the one-way paging 929–930 MHz band, that the proposed station location is west of Line C as defined in § 90.7.

(2) The proposed antenna structure has been previously studied by the Federal Aviation Administration and determined to pose no hazard to aviation safety as required by § 17.4 of the Commission's Rules; or the proposed antenna or tower structure does not exceed 6.1 meters (20 feet) above ground level or above an existing man-made structure (other than an antenna structure), if the antenna or tower has not been previously studied by the Federal Aviation Administration and cleared by the FCC.

(3) The grant of the application does not require a waiver of the Commission's Rules.

(4) The applicant has determined that the proposed facility will not significantly affect the environment as defined in § 1.1307.

(5) The applicant has determined that the proposed station affords the level of protection to radio "quiet" zones and monitoring facilities as specified in § 90.177.

(6) The applicant has submitted an application to the Commission stating the frequency the applicant intends to use and that the frequency coordination requirements specified in § 90.175 for selection and use of this frequency have been met and a minimum of ten business days has passed between submission of the application to the Commission and the onset of operation.

(c) An applicant proposing to operate an itinerant station or an applicant seeking the assignment of authorization or transfer of control of a license for an existing station below 470 MHz or in the 929–930 MHz band (other than a commercial mobile radio service applicant or licensee on these bands) may operate the proposed station during the pendency of the application for a period not to exceed one hundred eighty (180) days under a conditional permit upon the filing of a properly completed formal application that complies with § 90.127. Conditional authority ceases immediately if the application is returned by the Commission because it is not acceptable for filing. All other categories of applications listed in § 90.175(i) that do not require evidence of frequency coordination are excluded from the provisions of this section.

(d) A conditional authorization pursuant to paragraphs (b) and (c) of this section is evidenced by retaining the original executed conditional licensing 572C Certification Form with the station records. Conditional authorization does not prejudice any action the Commission may take on the subject application. Conditional authority is accepted with the express understanding that such authority may be modified or cancelled by the Commission at any time without hearing if, in the Commission's discretion, the need for such action arises. Consistent with § 90.175(g), the applicant assumes all risks associated with operation under conditional authority, the termination or modification of conditional authority, or the subsequent dismissal or denial of its application. Authority reverts back to the original licensee if an assignee or transferee's conditional authority is cancelled.

(e) The transmissions of new stations operating pursuant to conditional authority shall be identified by a temporary call sign consisting of the prefix "WT" followed by the applicant's local seven digit business telephone number as provided in § 2.302. Transmissions by applicants for the modification, assignment of authorization or transfer of control of an existing station shall be identified by the station's call sign.

[51 FR 14997, Apr. 22, 1986, as amended at 54 FR 50239, Dec. 5, 1989; 58 FR 44956, Aug. 25, 1993; 58 FR 62291, Nov. 26, 1993; 59 FR 59959, Nov. 21, 1994; 62 FR 18924, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18924, Apr. 17, 1997, § 90.159 was amended by revising the introductory text of paragraph (b), paragraph (b)(6), the last sentence of paragraph (c), and the fourth sentence of paragraph (d), effective Oct. 17, 1997.

SPECIAL RULES GOVERNING FACILITIES USED TO PROVIDE COMMERCIAL MOBILE RADIO SERVICES

SOURCE: 59 FR 59959, Nov. 21, 1994, unless otherwise noted.

NOTE: The following rules (§§ 90.160 through 90.169) govern applications, licensing, and operation of radio facilities in the 220-222 MHz (subpart T), Business Radio (Subpart D), 929-930 MHz Paging (subpart P), and Specialized Mobile Radio (Subpart S) services that are used to provide commercial mobile radio services (see §§ 20.3 and 20.9 of this chapter). Compliance with the rules relating to applications and licensing of facilities on paging-only channels in the Business Radio Service (see § 90.75(c)(10)) and 929-930 MHz paging channels (see § 90.494(a),(b)) is not required prior to August 10, 1996. Compliance with § 90.168 is also not required prior to August 10, 1996 for reclassified commercial mobile radio service providers who are to be regulated as private carriers until August 10, 1996 as provided in the Second Report and Order in GN Docket No. 93-252, 9 FCC Rcd 2348 (1994), paras. 280-284. The licensing and operation of radio facilities in the 220-222 MHz (Subpart T), Business Radio (Subpart D), 929-930 MHz Paging (Subpart P), and Specialized Mobile Radio (Subpart S) services that are used to provide commercial mobile radio services are also subject to rules elsewhere in this part that apply generally to Private Land Mobile Radio Services. In the case of any conflict between rules set forth in §§ 90.160 through 90.169 and other rules in this part, §§ 90.160 through 90.169 apply.

§ 90.160 Public notice.

Periodically, the Commission will issue Public Notices listing major filings and other information of public significance concerning commercial mobile radio services licensed under this part. Categories of Public Notice listings are as follows:

(a) *Accepted for filing.* Acceptance for filing of all applications and major amendments thereto.

(b) *Actions.* Commission actions on pending applications previously listed as accepted for filing.

(c) *Informative listings.* Information that the Commission, in its discretion, believes to be of public significance. Such listings do not create any rights to file oppositions or other pleadings.

§ 90.161 Amendment or dismissal of applications.

(a) *Amendment.* Pending applications concerning facilities for providing commercial mobile radio services may be amended as a matter of right if such applications have not been designated for hearing or listed in a Public Notice for a random selection or competitive bidding process, except as provided in paragraphs (a)(1) and (a)(2) of this section. If a petition to deny or other formal objection has been filed, a copy of any amendment (or other filing) must be served on the petitioner. If the Commission has issued a Public Notice stating that the application appears to be mutually exclusive with another application (or applications), a copy of any amendment (or other filing) must be served on any such mutually exclusive applicant (or applicants).

(1) Amendments to applications that resolve mutual exclusivity may be filed at any time, subject to the requirements of § 90.162.

(2) Amendments to applications designated for hearing may be allowed by the presiding officer and amendments to applications selected in a random selection process may be allowed by the Commission for good cause shown. In such instances, a written petition demonstrating good cause must be submitted and served upon the parties of record.

(b) *Dismissal.* The Commission may dismiss any application for authorization, assignment of authorization, or

consent to transfer of control of a commercial mobile radio facility.

(1) Upon request by the applicant; Any applicant may request that its application be returned or dismissed. A request for the return of an application after it has been listed on Public Notice as tentatively accepted for filing is considered to be a request for dismissal of that application without prejudice.

(i) If the applicant requests dismissal of its application with prejudice, the Commission will dismiss the application with prejudice.

(ii) If the applicant requests dismissal of its application without prejudice, the Commission will dismiss that application without prejudice, unless

(A) The application has been designated for comparative hearing;

(B) It has been selected in a random selection process; or

(C) It is an application for which the applicant submitted the winning bid in a competitive bidding process. If the applicant requests dismissal of its application for which it submitted the winning bid in a competitive bidding process, the Commission will dismiss that application with prejudice. If the applicant requests dismissal of its application after that application has been designated for comparative hearing or selected in a random selection process, it may submit a written petition requesting that the dismissal be without prejudice. Such petition must demonstrate good cause, comply with § 90.162 of this part, and be served upon all parties of record. The Commission may grant such petition and dismiss the application without prejudice or deny the petition and dismiss the application with prejudice.

(2) If the application is untimely filed; The Commission may dismiss without prejudice any application that is prematurely or filed late, including any application filed prior to the opening date or after the closing date of a filing window, or after the cut-off date for a mutually exclusive application filing group.

(3) If the application is mutually exclusive with another application that is selected or granted in accordance with the rules in this part; The Commission may dismiss any mutually exclusive application:

(i) For which the applicant did not submit the winning bid in a competitive bidding process;

(ii) That is included in a random selection process but is not granted; or

(iii) That receives comparative consideration in a hearing but is not granted by order of the presiding officer.

(4) For failure to prosecute; The Commission may dismiss applications for failure of the applicant to prosecute or for failure of the applicant to respond substantially within a specified time period to official correspondence or requests for additional information. Such dismissal will generally be without prejudice if the failure to prosecute or respond occurred prior to designation of the application for comparative hearing or prior to selection of the application in a random selection process, but may be with prejudice in cases of non-compliance with § 90.162. Dismissal will generally be with prejudice if the failure to prosecute or respond occurred after designation of the application for comparative hearing or after selection of the application in a random selection process. The Commission may dismiss applications with prejudice for failure of the applicant to comply with requirements related to a competitive bidding process.

(5) If the requested spectrum is not available; The Commission may dismiss any application that requests spectrum which is unavailable because:

(i) It was previously assigned to another licensee on an exclusive basis or cannot be assigned to the applicant without causing interference; or

(ii) Reasonable efforts have been made to coordinate the proposed facility with foreign administrations under applicable international agreements, and an unfavorable response (harmful interference anticipated) has been received.

(6) If the application is found to be defective. Such dismissal may be "without prejudice," meaning that the Commission may accept from the applicant another application for the same purpose at any later time, or "with prejudice," meaning that the Commission will not accept from the applicant another application for the same purpose for a period of one year

following the date of the dismissal action taken by the Commission. Unless otherwise provided in this part, a dismissed application will not be returned to the applicant. The Commission may dismiss without prejudice applications that it finds to be defective. An application for authorization or assignment of authorization is defective if:

- (i) It is unsigned or incomplete with respect to required answers to questions, informational showings, or other matters of a formal character; or
- (ii) It requests an authorization that would not comply with the Commission's Rules and does not contain a request for waiver of these rule(s), or in the event that the Commission denies such a waiver request, does not contain an alternative proposal that fully complies with the rules.

§ 90.162 Agreements to dismiss applications, amendments, or pleadings.

(a) Parties that have filed an application concerning facilities used to provide commercial mobile radio services that is mutually exclusive with one or more other applications, and then enter into an agreement to resolve the mutual exclusivity by withdrawing or requesting dismissal of the application or an amendment thereto, must obtain the approval of the Commission. Parties that have filed or threatened to file a petition to deny, informal objection, or other pleading against a pending application, and then seek to withdraw or request dismissal of, or refrain from filing, the petition, either unilaterally or in exchange for a financial consideration, must obtain the approval of the Commission.

(b) The party withdrawing or requesting dismissal of its application, petition to deny, informal objection, or other pleading, or refraining from filing a pleading, must submit to the Commission a request for approval of the withdrawal or dismissal, a copy of any written agreement related to the withdrawal or dismissal, and an affidavit setting forth:

(1) A certification that neither the party nor its principals has received or will receive any money or other consideration in excess of the legitimate and prudent expenses incurred in preparing and prosecuting the application, peti-

tion to deny, informal objection, or other pleading in exchange for the withdrawal or dismissal of the application, petition to deny, informal objection, or other pleading, or threat to file a pleading, except that this provision does not apply to dismissal or withdrawal of applications pursuant to bona fide merger agreements:

(2) The exact nature and amount of any consideration received or promised;

(3) An itemized accounting of the expenses for which it seeks reimbursement; and

(4) The terms of any oral agreement related to the withdrawal or dismissal of the application, petition to deny, informal objection, or other pleading or threat to file a pleading.

(c) In addition, within five (5) days of the filing date of the applicant's or petitioner's request for approval, each remaining party to any written or oral agreement must submit an affidavit setting forth:

(1) A certification that neither the applicant nor its principals has paid or will pay money or other consideration in excess of the legitimate and prudent expenses of the petitioner in exchange for withdrawing or dismissing the application, petition to deny, informal objection, or other pleading; and

(2) The terms of any oral agreement relating to the withdrawal or dismissal of the application, petition to deny, informal objection, or other pleading.

(d) No person shall make or receive any payments in exchange for withdrawing a threat to file or refraining from filing a petition against an application. For purposes of this section, reimbursement by an applicant of the legitimate and prudent expenses of a potential petitioner or objector, incurred reasonably and directly in preparing to file a petition to deny, will not be considered to be payment for refraining from filing a petition to deny or an informal objection. Payments made directly to a potential petitioner or objector, or a person related to a potential petitioner or objector, to implement non-financial promises are prohibited unless specifically approved by the Commission.

(e) For purposes of this section:

(1) Affidavits filed pursuant to this section must be executed by the filing party, if an individual, a partner having personal knowledge of the facts, if a partnership, or an officer having personal knowledge of the facts, if a corporation or association.

(2) Applications, petitions to deny, informal objections, and other pleadings are deemed to be pending before the Commission from the time the application or petition to deny is filed with the Commission until such time as an order of the Commission granting, denying, or dismissing the application, petition to deny, informal objection, or other pleading is no longer subject to reconsideration by the Commission or to review by any court.

(3) “Legitimate and prudent expenses” are those expenses reasonably incurred by a party in preparing to file, filing, prosecuting and/or settling its application, petition to deny, informal objection, or other pleading for which reimbursement is sought.

(4) “Other consideration” consists of financial concessions, including, but not limited to, the transfer of assets or the provision of tangible pecuniary benefit, as well as non-financial concessions that confer any type of benefit on the recipient.

(f) Notwithstanding the provisions of this section, any payments made or received in exchange for withdrawing a short-form application for an FCC authorization awarded through competitive bidding shall be subject to the restrictions set forth in section § 1.2105(c) of this chapter.

[59 FR 59959, Nov. 21, 1994, as amended at 62 FR 11636, Mar. 12, 1997]

§ 90.163 Petitions to deny, responsive pleadings.

Petitions to deny any major filing concerning facilities used to provide commercial mobile radio services may be filed by parties able to demonstrate standing to file such petitions. Responsive pleadings to such petitions may be filed in accordance with the provisions of this section.

(a) *Content and requirements.* Petitions to deny and responsive pleadings must:

(1) Clearly identify the pertinent major filing(s);

(2) Comply with all applicable requirements of §§ 1.41 through 1.52 of this chapter;

(3) Contain specific allegations of fact which, except for facts of which official notice may be taken, are supported by affidavit of a person or persons with personal knowledge thereof, and which are sufficient to demonstrate that the petitioner (or respondent) is a party in interest and that a grant or other Commission action regarding the major filing would be inconsistent with the public interest;

(4) Be filed within 30 days after the date of the Public Notice listing the major filing; and

(5) Contain a certificate of service showing that a copy has been mailed to the applicant no later than the date of filing with the Commission.

(b) *Expansion.* Petitions to deny a major amendment to an application may raise only matters directly related to the major amendment that could not have been raised in connection with the application as originally filed. This paragraph does not apply to petitioners who gain standing because of the major amendment.

(c) *Dismissal.* The Commission may, by letter, dismiss any petition to deny a major filing if the petition does not comply with the requirements of this section or § 90.161. The reason(s) for the dismissal must be stated in the letter. When a petition to deny is dismissed, any related responsive pleadings also are dismissed.

§ 90.164 Classification of filings as major or minor.

Applications and amendments to applications are classified as major or minor when such filings concern facilities used to provide commercial mobile radio services. Categories of major and minor filings are listed in section 309 of the Communications Act of 1934, as amended (47 U.S.C. 309). In general, a major filing is a request for a Commission action that has the potential to affect parties other than the applicant. The following are major filings:

(a) *Initial station authorization.* Filings for an initial authorization as defined in § 90.165(d)(2) are major.

(b) *Ownership or control change.* Filings are major if they specify a substantial change in beneficial ownership or control (de jure or de facto), unless such change is involuntary or if the filing merely amends an application to reflect a change in ownership or control that has already been approved by the Commission.

(c) *Renewal.* Applications for renewal of authorizations are major.

(d) *Environmental.* Filings are major if they request authorization for a facility that would have a significant environmental effect, as defined by §§1.1301 through 1.1319 of this chapter.

(e) In the Specialized Mobile Radio Service, in addition to filings listed in paragraphs (a) through (d) of this section, filings are major if they:

- (1) Request a change in frequency;
- (2) Request an authorization that would increase the effective radiated power or antenna height above average terrain in any azimuth from an existing transmitter authorized to the filer;
- (3) Request an authorization that would relocate an existing fixed transmitter;
- (4) Amend a pending application to change a requested frequency;
- (5) Amend a pending application in a way that would increase the proposed effective radiated power or antenna height above average terrain in any azimuth from an existing transmitter authorized to the filer;
- (6) Amend a pending application to change the location of a fixed transmitter from that previously proposed in the application; or
- (7) Amend a pending application for which pre-filing coordination was required to change the technical proposal substantially from that which was coordinated with other users.

§90.165 Procedures for mutually exclusive applications.

Mutually exclusive commercial mobile radio service applications are processed in accordance with the rules in this section, except for mutually exclusive applications for licenses in the 220–220 MHz service and the 929–930 MHz Paging service, which are processed in accordance with the rules in subpart P and subpart T of this part.

Two or more pending applications are mutually exclusive if the grant of one application would effectively preclude the grant of one or more of the others under Commission rules governing the services involved.

(a) *Separate applications.* Any applicant that files an application knowing that it will be mutually exclusive with one or more applications should not include in the mutually exclusive application a request for other channels or facilities that would not, by themselves, render the application mutually exclusive with those other applications. Instead, the request for such other channels or facilities should be filed in a separate application.

(b) *Filing groups.* Pending mutually exclusive applications are processed in filing groups. Mutually exclusive applications in a filing group are given concurrent consideration. The Commission may dismiss as defective (pursuant to §90.162) any mutually exclusive applications(s) whose filing date is outside of the date range for inclusion in the filing group. The types of filing groups used in day-to-day application processing are specified in paragraph (c)(3) of this section. A filing group is one of the following types:

(1) *Renewal filing group.* A renewal filing group comprises a timely-filed application for renewal of an authorization and all timely-filed mutually exclusive competing applications.

(2) *Same-day filing group.* A same-day filing group comprises all mutually exclusive applications whose filing date is the same day, which is normally the filing date of the first-filed applications(s).

(3) *Thirty-day notice and cut-off filing group.* A 30-day notice and cut-off filing group comprises mutually exclusive applications whose filing date is no later than thirty (30) days after the date of the Public Notice listing the first-filed application(s) (according to the filing dates) as acceptable for filing.

(4) *Window filing group.* A window filing group comprises mutually exclusive applications whose filing date is within an announced filing window. An announced filing window is a period of time between and including two specific dates, which are the first and last

dates on which applications (or amendments) for a particular purpose may be accepted for filing. In the case of a one-day filing window, the two dates are the same. The dates are made known to the public in advance.

(c) *Procedures.* Generally, the Commission may grant one application in a filing group of mutually exclusive applications and dismiss the other application(s) in the filing group that are excluded by the grant, pursuant to § 90.162.

(1) *Selection methods.* In selecting the application to grant, the Commission may use competitive bidding, random selection, or comparative hearings, depending on the type of applications involved.

(2) *Dismissal of applications.* The Commission may dismiss any application in a filing group that is defective or otherwise subject to dismissal under § 90.162, either before or after employing selection procedures.

(3) *Type of filing group used.* Except as otherwise provided in this part, the type of filing group used in processing of two or more mutually exclusive applications depends on the purpose(s) of the applications.

(i) If one of the mutually exclusive applications is a timely-filed application for renewal of an authorization, a renewal filing group is used.

(ii) If any mutually exclusive application filed on the earliest filing date is an application for modification and none of the mutually exclusive applications is a timely-filed application for renewal, a same-day filing group is used.

(iii) If all of the mutually exclusive applications filed on the earliest filing date are applications for initial authorization, a 30-day notice and cut-off filing group is used.

(4) *Disposition.* If there is only one application in any type of filing group, the Commission may grant that application and dismiss without prejudice any mutually exclusive applications not in the filing group. If there is more than one mutually exclusive application in a filing group, the Commission disposes of these applications as follows:

(i) Applications in a renewal filing group. All mutually exclusive applica-

tions in a renewal filing group are designated for comparative consideration in a hearing.

(ii) Applications in a 30-day notice and cut-off filing group.

(A) If all of the mutually exclusive applications in a 30-day notice and cut-off filing group are applications for initial authorization, the Commission administers competitive bidding procedures in accordance with subpart Q of part 1 of this chapter. After such procedures, the application of the successful bidder may be granted and the other applications may be dismissed without prejudice.

(B) If any of the mutually exclusive applications in a 30-day notice and cut-off filing group is an application for modification or an application for facilities, the Commission may attempt to resolve the mutual exclusivity by facilitating a settlement between the applicants. If a settlement is not reached within a reasonable time, the Commission may designate all applications in the filing group for comparative consideration in a hearing. In this event, the result of the hearing disposes all of the applications in the filing group.

(iii) Applications in a same-day filing group. If there are two or more mutually exclusive applications in a same-day filing group, the Commission may attempt to resolve the mutual exclusivity by facilitating a settlement between the applicants. If a settlement is not reached within a reasonable time, the Commission may designate all applications in the filing group for comparative consideration in a hearing. In this event, the result of the hearing disposes all of the applications in the filing group.

(iv) Applications in a window filing group. Applications in a window filing group are processed in accordance with the procedures for a 30-day notice and cut-off filing group in paragraph (c)(4)(ii) of this section.

(d) *Terminology.* For the purposes of this section, terms have the following meanings:

(1) The “filing date” of an application is the date on which that application was received in a condition acceptable for filing or the date on which the most recently filed major amendment to that application was received,

whichever is later, excluding major amendments in the following circumstances:

(i) The major amendment reflects only a change in ownership or control found by the Commission to be in the public interest;

(ii) The major amendment as received is defective or otherwise found unacceptable for filing; or

(iii) The application being amended has been designated for hearing and the Commission or the presiding officer accepts the major amendment.

(2) An "application for initial authorization" is:

(i) Any application requesting an authorization for a new system or station;

(ii) Any application requesting authorization for an existing station to operate on an additional channel, unless the additional channel is for paired two-way radiotelephone operation, is in the same frequency range as the existing channel(s), and will be operationally integrated with the existing channel(s) such as by trunking; or

(iii) any application requesting authorization for a new transmitter at a location more than 2 kilometers (1.2 miles) from any existing transmitters of the applicant licensee on the requested channel or channel block.

(3) An "application for modification" is any application other than an application for initial authorization or renewal.

§ 90.166 Grants of applications.

Applications for a commercial mobile radio service authorization under this part may be granted thirty (30) days after the issuance date of a Public Notice listing an application or the latest filed major amendment thereto as acceptable for filing.

(a) *Criteria for grants.* The Commission grants applications without a hearing if, after examination of the application and consideration of any petitions or other pleadings and of such other matters as it may officially notice, the Commission finds that:

(1) A grant will serve the public interest, convenience, and necessity;

(2) There are no substantial and material questions of fact presented;

(3) The applicant is eligible and qualified under applicable Commission regulations and policies;

(4) The application is acceptable for filing, and complies with the Commission rules and other applicable requirements;

(5) The application has not been designated for a hearing after being selected in a random selection process;

(6) There are no applications entitled to comparative consideration with the application being granted; and

(7) Operation of the proposed station would not cause interference to any authorized station(s).

(b) *Grant of petitioned applications.* The Commission may grant, without a formal hearing, applications against which petitions to deny have been filed. If any petition(s) to deny are pending (*i.e.*, have not been dismissed pursuant to § 90.161 or withdrawn by the petitioner) when an application is granted, the Commission shall deny the petition(s) and issue a concise statement of the reason(s) for the denial, disposing of all substantive issues raised in the petitions.

(c) *Partial and conditional grants.* The Commission may grant applications in part, and/or subject to conditions other than those normally applied to authorizations of the same type. When the Commission does this, it will inform the applicant of the reasons therefor. Such partial or conditional grants are final unless the Commission revises its action in response to a petition for reconsideration. Such petitions for reconsideration must be filed by the applicant within thirty days after the date of the letter or order stating the reasons for the partial or conditional grant, and must reject the partial or conditional grant and return the instrument of authorization.

(d) *Designation for hearing.* The Commission may designate applications for a hearing, specifying with particularity the matters in issue, if, after consideration of the application, any petitions or other pleadings, and other matters which it may officially notice, the Commission is unable to make one or

more of the findings listed in paragraph (a) of this section. The Commission may grant, deny, or take other action with respect to applications designated for a hearing.

§ 90.167 Time in which a station must commence service.

(a) Unless otherwise specified in this part, all 220–222 MHz, private carrier paging, Industrial/Business Pool, and SMR licensees must commence service within twelve (12) months from the date of grant or the authorization cancels automatically and must be returned to the Commission.

(b) For purposes of this section, a station licensed to provide commercial mobile radio service is not considered to have commenced service unless it provides service to at least one unaffiliated party.

(c) Application for extension of time to commence service may be made on Commission Form 600. Extensions of time must be filed prior to the expiration of the construction period. Extensions will be granted only if the licensee shows that the failure to commence service is due to causes beyond his or her control. No extensions will be granted for delays caused by lack of financing, lack of site availability, for the assignment or transfer of control of an authorization, or for failure to timely order equipment. If the licensee orders equipment within 90 days of the license grant, a presumption of due diligence is created.

(d) An application for modification of an authorization (under construction) at the existing location does not extend the initial construction period. If additional time to commence service is required, a request for such additional time must be submitted on Commission Form 600, either separately or in conjunction with the submission of the Commission Form 600 requesting modification.

[59 FR 59959, Nov. 21, 1994, as amended at 62 FR 18925, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18925, Apr. 17, 1997, § 90.167 was amended by revising paragraph (a), effective Oct. 17, 1997.

§ 90.168 Equal employment opportunities.

Commercial Mobile Radio Services licensees shall afford equal opportunity in employment to all qualified persons, and personnel must not be discriminated against in employment because of sex, race, color, religion, or national origin.

(a) *Equal employment opportunity program.* Each licensee shall establish, maintain, and carry out a positive continuing program of specific practices designed to assure equal opportunity in every aspect of employment policy and practice.

(1) Under the terms of its program, each licensee shall:

(i) Define the responsibility of each level of management to insure a positive application and vigorous enforcement of the policy of equal opportunity, and establish a procedure to review and control managerial and supervisory performance.

(ii) Inform its employees and recognized employee organizations of the positive equal employment opportunity policy and program and enlist their cooperation.

(iii) Communicate its equal employment opportunity policy and program and its employment needs to sources of qualified applicants without regard to sex, race, color, religion or national origin, and solicit their recruitment assistance on a continuing basis.

(iv) Conduct a continuing campaign to exclude every form of prejudice or discrimination based upon sex, race, color, religion, or national origin, from the licensee's personnel policies and practices and working conditions.

(v) Conduct a continuing review of job structure and employment practices and adopt positive recruitment, training, job design and other measures needed in order to insure genuine equality of opportunity to participate fully in all organizational units, occupations and levels of responsibility.

(2) The program must reasonably address specific concerns through policies and actions as set forth in this paragraph, to the extent that they are appropriate in consideration of licensee size, location and other factors.

(i) To assure nondiscrimination in recruiting.

(A) Posting notices in the licensee's offices informing applicants for employment of their equal employment rights and their right to notify the Equal Employment Opportunity Commission (EEOC), the Federal Communications Commission (Commission), or other appropriate agency. Where a substantial number of applicants are Spanish-surnamed Americans, such notice should be posted in both Spanish and English.

(B) Placing a notice in bold type on the employment application informing prospective employees that discrimination because of sex, race, color, religion, or national origin is prohibited, and that they may notify the EEOC, the Commission, or other appropriate agency if they believe they have been discriminated against.

(C) Placing employment advertisements in media which have significant circulation among minority groups in the recruiting area.

(D) Recruiting through schools and colleges with significant minority group enrollments.

(E) Maintaining systematic contacts with minority and human relations organizations, leaders and spokespersons to encourage referral of qualified minority or female applicants.

(F) Encouraging present employees to refer minority or female applicants.

(G) Making known to the appropriate recruitment sources in the employer's immediate area that qualified minority members are being sought for consideration whenever the licensee hires.

(ii) To assure nondiscrimination in selection and hiring.

(A) Instructing employees of the licensee who make hiring decisions that all applicants for all jobs are to be considered without discrimination.

(B) Where union agreements exist, cooperating with the union or unions in the development of programs to assure qualified minority persons or females of equal opportunity for employment, and including an effective nondiscrimination clause in new or renegotiated union agreements.

(C) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iii) To assure nondiscriminatory placement and promotion.

(A) Instructing employees of the licensee who make decisions on placement and promotion that minority employees and females are to be considered without discrimination, and that job areas in which there is little or no minority or female representation should be reviewed to determine whether this results from discrimination.

(B) Giving minority groups and female employees equal opportunity for positions which lead to higher positions. Inquiring as to the interest and skills of all lower-paid employees with respect to any of the higher-paid positions, followed by assistance, counseling, and effective measures to enable employees with interest and potential to qualify themselves for such positions.

(C) Reviewing seniority practices to insure that such practices are nondiscriminatory and do not have a discriminatory effect.

(D) Avoiding use of selection techniques or tests that have the effect of discriminating against minority groups or females.

(iv) to assure nondiscrimination in other areas of employment practices.

(A) Examining rates of pay and fringe benefits for present employees with equivalent duties and adjusting any inequities found.

(B) Providing opportunity to perform overtime work on a basis that does not discriminate against qualified minority groups or female employees.

(b) *EEO statement.* Each licensee having sixteen (16) or more full-time employees shall file with the Commission, no later than May 31st following the grant of that licensee's first Commercial Mobile Radio Services authorization, a statement describing fully its current equal employment opportunity program, indicating specific practices to be followed in order to assure equal employment opportunity on the basis of sex, race, color, religion, or national origin in such aspects of employment practices as regards recruitment, selection, training, placement, promotion, pay, working conditions, demotion, layoff, and termination. Any licensee having sixteen (16) or more full-time

employees that changes its existing equal employment opportunity program shall file with the Commission, no later than May 31st thereafter, a revised statement reflecting the change(s).

NOTE: Commercial mobile radio service licensees having sixteen (16) or more full-time employees that do not have a current EEO statement on file with the Commission as of January 2, 1995, must file the statement required by this paragraph no later than May 31, 1995.

(c) *Report of complaints filed against licensees.* Each licensee, regardless of how many employees it has, shall submit an annual report to the Commission no later than May 31st of each year indicating whether any complaints regarding violations by the licensee or equal employment provisions of Federal, State, Territorial, or local law have been filed before anybody having competent jurisdiction.

(1) The report should state the parties involved, the date filing, the courts or agencies before which the matters have been heard, the appropriate file number (if any), and the respective disposition or current status of any such complaints.

(2) Any licensee who has filed such information with the EEOC may file a notification of such filing with the Commission in lieu of a report.

(d) *Complaints of violations of Equal Employment Programs.* Complaints alleging employment discrimination against a common carrier licensee are considered by the Commission in the following manner:

(1) If a complaint raising an issue of discrimination is received against a licensee who is within the jurisdiction of the EEOC, it is submitted to that agency. The Commission maintains a liaison with that agency that keeps the Commission informed of the disposition of complaints filed against common carrier licensees.

(2) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the jurisdiction of the EEOC but is covered by appropriate enforceable State law, to which penalties apply, may be submitted by the Commission to the respective State agency.

(3) Complaints alleging employment discrimination against a common carrier licensee who does not fall under the jurisdiction of the EEOC or an appropriate State law, are accorded appropriate treatment by the Commission.

(4) The Commission will consult with the EEOC on all matters relating to the evaluation and determination of compliance by the common carrier licensees with the principles of equal employment as set forth herein.

(5) Complaints indicating a general pattern of disregard of equal employment practices which are received against a licensee that is required to file an employment report to the Commission under §1.815(a) of this chapter are investigated by the Commission.

(e) *Commission records.* A copy of every annual employment report, equal employment opportunity program statement, reports on complaints regarding violation of equal employment provisions of Federal, State, Territorial, or local law, and copies of all exhibits, letters, and other documents filed as part thereof, all amendments thereto, all correspondence between the licensee and the Commission pertaining to the reports after they have been filed and all documents incorporated therein by reference, are open for public inspection at the offices of the Commission.

(f) *Licensee records.* Each licensee required to file annual employment reports (pursuant to §1.815(a) of this chapter), equal employment opportunity program statements, and annual reports on complaints regarding violations of equal employment provisions of Federal, State, Territorial, or local law shall maintain for public inspection a file containing a copy of each such report and copies of all exhibits, letters, and other documents filed as part thereto, all correspondence between the licensee and the Commission pertaining to the reports after they have been filed and all documents incorporated therein by reference. The documents must be retained for a period of two (2) years.

§ 90.169 Construction prior to grant of application.

Applicants may construct facilities prior to grant of their applications, subject to the provisions of this section, but must not operate such facilities until the Commission grants an authorization. If the conditions stated in this section are not met, applicants must not begin to construct facilities.

(a) *When applicants may begin construction.* An applicant may begin construction of a facility thirty-five (35) days after the date of the Public Notice listing the application for that facility as acceptable for filing.

(b) *Notification to stop.* If the Commission for any reason determines that construction should not be started or should be stopped while an application is pending, and so notifies the applicant, orally (followed by written confirmation) or in writing, the applicant must not begin construction or, if construction has begun, must stop construction immediately.

(c) *Assumption of risk.* Applicants that begin construction pursuant to this section before receiving an authorization do so at their own risk and have no recourse against the United States for any losses resulting from:

(1) Applications that are not granted;
(2) Errors or delays in issuing Public Notices;

(3) Having to alter, relocate, or dismantle the facility; or

(4) Incurring whatever costs may be necessary to bring the facility into compliance with applicable laws, or Commission rules and orders.

(d) *Conditions.* Except as indicated, all pre-grant construction is subject to the following conditions:

(1) The application is not mutually exclusive with any other application;

(2) No petitions to deny the application have been filed;

(3) The application does not include a request for a waiver of one or more Commission rules;

(4) For any construction or alteration that would exceed the requirements of § 17.7 of this chapter, the licensee has notified the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460-1), filed a request for antenna height clearance and obstruction marking and

lighting specifications (FCC Form 854) with the Commission;

(5) The applicant has indicated in the application that the proposed facility would not have a significant environmental effect, in accordance with §§ 1.1301 through 1.1319 of this chapter; and,

(6) Under applicable international agreements and rules in this part, individual coordination of the proposed channel assignment(s) with a foreign administration is not required.

Subpart H—Policies Governing the Assignment of Frequencies**§ 90.171 Scope.**

This subpart contains detailed information concerning the policies under which the Commission assigns frequencies for the use of licensees under this part, frequency coordination procedures, and procedures under which licensees may cooperatively share radio facilities.

§ 90.173 Policies governing the assignment of frequencies.

(a) The frequencies which ordinarily may be assigned to stations in the services governed by this part are listed in subparts B, C and F of this part. Frequencies other than those listed in subparts B and C may be assigned in the 150-174 MHz, 421-430 MHz, 450-470 MHz, and 470-512 MHz bands, provided such applications are accompanied by a showing of frequency coordination in accordance with the requirements of § 90.175. Except as otherwise specifically provided in this part, frequencies assigned to land mobile stations are available on a shared basis only and will not be assigned for the exclusive use of any licensee.

(b) All applicants and licensees shall cooperate in the selection and use of frequencies in order to reduce interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If the licensees are unable to do so, the Commission may impose restrictions including specifying the transmitter power, antenna height, or area or hours

of operation of the stations concerned. Further the use of any frequency at a given geographical location may be denied when, in the judgment of the Commission, its use in that location is not in the public interest; the use of any frequency may be restricted as to specified geographical areas, maximum power, or such other operating conditions, contained in this part or in the station authorization.

(c) Frequencies allocated for Federal Government radio stations under Executive order of the President may be authorized for the use of stations in these services upon appropriate showing by the applicant that such assignment is necessary for inter-communication with government stations or required for coordination with activities of the Federal Government, and where the Commission finds, after consultation with the appropriate government agency or agencies, that such assignment is necessary.

(d) The radio facilities authorized under this part are intended for use in connection with and as an adjunct to the primary governmental or business activities of the licensee.

(e) Persons requesting authority to operate in the band 25–50 MHz should recognize that this band is shared with various services in other countries and that harmful interference may be caused by the propagation of signals in this band from distant stations. No protection from such harmful interference generally can be expected.

(f) Applications for stations in the 150–174 MHz and 421–512 MHz bands for operation on frequencies 15 kHz or less removed from existing stations in the same geographic area will be granted based upon a recommendation from the applicable frequency coordinator as specified in §§ 90.20(c)(2) and 90.35(b)(2).

(g) In the states of Alaska and Hawaii, and in areas outside the continental limits of the United States and the adjacent waters, the frequencies above 150.8 MHz which are listed elsewhere in this part as available for assignment to base stations or mobile stations in the Industrial/Business Pool are also available for assignment to operational fixed stations in the Industrial/Business Pool on a secondary basis.

(h) In the Public Safety Pool, base stations may be authorized to operate on a secondary basis on frequencies below 450 MHz which are available to mobile stations.

(i) In the 450–470 MHz band, the frequencies are ordinarily assigned in pairs, with the mobile station transmit frequency 5 MHz above the paired base station transmit frequency. In the 470–512 MHz band, the frequencies are ordinarily assigned in pairs with the mobile station transmit frequency 3 MHz above the paired base station transmit frequency. In the Industrial/Business Pool, in the 150 MHz band, the frequencies subject to § 90.35(c)(6) may be assigned in pairs with the separation between base and mobile frequencies being 5.26 MHz. A mobile station may be assigned the frequency which would normally be assigned to a base station for single-frequency operation. However, this single-frequency operation may be subject to interference that would not occur to a two-frequency system.

(j) [Reserved]

(k) Notwithstanding any other provisions of this part, any eligible person may seek a dispositive preference for a channel assignment on an exclusive basis in the 220–222 MHz, 470–512 MHz, and 800/900 MHz (except on frequencies designated exclusively for SMR service) bands by submitting information that leads to the recovery of channels in these bands. Recovery of such channels must result from information provided regarding the failure of existing licensees to comply with the provisions of §§ 90.155, 90.157, 90.629, 90.631 (e) or (f), or 90.633 (c) or (d). Any recovered channels in the 900 MHz SMR service will revert automatically to the MTA licensee.

(l) In the 150–174 MHz band, except where otherwise specifically provided, authorizations for frequencies that were available prior to August 18, 1995 will be granted with channel bandwidths of 25 kHz or less. Authorizations for all other frequencies in this band will be granted with channel bandwidths of 12.5 kHz or less (*i.e.*, in the Public Safety Pool, frequencies subject to §§ 90.20 (d)(27) and (d)(44), and

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in the Industrial/Business Pool, frequencies subject to §§ 90.35 (c)(30) and (c)(33)).

(m) In the 421-512 MHz band, except where otherwise specifically provided, authorizations for frequencies that were available prior to August 18, 1995 will be granted with channel bandwidths of 25 kHz or less. New authorizations for frequencies 12.5 kHz removed from these frequencies will be made for channel bandwidths of 12.5 kHz or less (*i.e.*, in the Public Safety Pool, frequencies subject to § 90.20(d)(27) and in the Industrial/Business Pool, frequencies subject to § 90.35(c)(30)). Authorizations for frequencies 6.25 kHz removed from these frequencies will be granted with channel bandwidths of 6.25 kHz or less (*i.e.*, in the Public Safety Pool, frequencies subject to § 90.20(d)(44), and in the Industrial/Business Pool, frequencies subject to § 90.35(c)(33)).

(n) Any recovered channels in the 800 MHz SMR service will revert automatically to the holder of the EA license within which such channels are included. If there is no EA licensee for recovered channels, such channels will be retained by the Commission for future licensing.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307)

[43 FR 54791, Nov. 22, 1978, as amended at 45 FR 43419, June 27, 1980; 46 FR 55704, Nov. 12, 1981; 50 FR 13605, Apr. 5, 1985; 54 FR 39739, Sept. 28, 1989; 56 FR 65859, Dec. 19, 1991; 57 FR 24992, June 12, 1992; 58 FR 51252, Oct. 1, 1993; 60 FR 37261, July 19, 1995; 60 FR 48917, Sept. 21, 1995; 61 FR 6155, Feb. 16, 1996; 62 FR 2038, Jan. 15, 1997; 62 FR 18925, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18925, Apr. 17, 1997, § 90.173 was amended by revising paragraphs (a), (f), (g), (h), (l), and (m), and the third sentence of paragraph (i), and removing and reserving paragraph (j), effective Oct. 17, 1997. For the convenience of the user, the superseded text not appearing in the Oct. 1, 1996 revision is set forth as follows:

§ 90.173 Policies governing the assignment of frequencies.

(a) The frequencies which ordinarily may be assigned to stations in the services governed by this part are listed in subparts B, C, D, E, and F of this part. Frequencies other than those listed in subparts B, C, D, and E may be assigned in the 150-174 MHz, 421-430 MHz, 450-470 MHz, and 470-512 MHz bands, provided such applications are accompanied

by a showing of frequency coordination in accordance with the requirements of Section 90.175. Except as otherwise specifically provided in this part, frequencies assigned to land mobile stations are available on a shared basis only and will not be assigned for the exclusive use of any licensee.

* * * * *

§ 90.175 Frequency coordination requirements.

Except for applications listed in paragraph (f) of this section, each application for a new frequency assignment, for a change in existing facilities as listed in § 90.135(a), or for operation at temporary locations in accordance with § 90.137, must include a showing of frequency coordination as set forth below. An application to reinstate a license expired for more than thirty (30) days will be considered as a request for a new frequency assignment.

(a) Frequency coordinators may request, and applicants are required to provide, all appropriate technical information, system requirements, and justification for requested station parameters when such information is necessary to identify and recommend the most appropriate frequency. Additionally, applicants bear the burden of proceeding and the burden of proof in requesting the Commission to overturn a coordinator's recommendation.

(b) *For frequencies between 25 and 470 MHz:* A statement is required from the applicable frequency coordinator as specified in §§ 90.20(c)(2) and 90.35(b)(2) recommending the most appropriate frequency. The coordinator's recommendation may include comments on technical factors such as power, antenna height and gain, terrain, and other factors which may serve to minimize potential interference.

(c) *For frequencies above 800 MHz:* When frequencies are shared by more than one service, concurrence must be obtained from the other applicable certified coordinators.

(d) *For frequencies in the 450-470 MHz band:* When used for secondary fixed operations, frequencies shall be assigned and coordinated pursuant to § 90.261.

(e) *For frequencies between 470 and 512 MHz, 806-824/851-869 MHz, and 896-901/935-940 MHz:* A statement is required

from the applicable coordinator recommending specific frequencies that are available for assignment in accordance with the loading standards and mileage separations applicable to the specific radio serve, frequency pool, or category of user involved.

(f) For frequencies in the 929–930 MHz band. A statement from the coordinator recommending the most appropriate frequency. For applications under § 90.495, the coordinator's statement must verify that the proposed system meets the requirements of that section.

(g) Any recommendation submitted in accordance with paragraphs (a), (c), (d), or (e) of this section is advisory in character and is not an assurance that the Commission will grant a license for operation on that frequency. Therefore, applicants are strongly advised not to purchase radio equipment operating on specific frequencies until a valid authorization has been obtained from the Commission.

(h) Applications for facilities near the Canadian border north of line A or east of line C in Alaska may require coordination with the Canadian government. See § 1.955 of this chapter.

(i) The following applications need not be accompanied by evidence of frequency coordination:

(1) Applications for frequencies below 25 MHz.

(2) Applications for a Federal Government frequency.

(3) Applications for frequencies in the 72–76 MHz band except for mobile frequencies subject to § 90.35(c)(77).

(4) Applications for a frequency to be used for developmental purposes.

(5) Applications in the Industrial/Business Pool requesting a frequency designated for itinerant operation only.

(6) Applications in the Radiolocation Service.

(7) [Reserved]

(8) Applications for frequencies listed in the SMR tables contained in §§ 90.617 and 90.619.

(9) Applications indicating license assignments such as change in ownership, control or corporate structure if there is no change in technical parameters.

(10) Applications for mobile stations operating in the 470–512 MHz band or above 800 MHz if the frequency pair is assigned to a single system on an exclusive basis in the proposed area of operation.

(11) Applications for add-on base stations in multiple licensed systems operating in the 470–512 MHz band or above 800 MHz if the frequency pair is assigned to a single system on an exclusive basis.

(12) Applications for control stations operating below 470 or above 800 MHz and meeting the requirements of § 90.119(a)(2)(ii).

(13) Applications for frequencies in the 216–220 and 1427–1435 MHz bands.

(14) Applications for frequencies in the 220–222 MHz band.

(15) Applications timely-filed by recipients of a finder's preference, where the applicant intends to operate at the same site location, and with the same technical parameters as the prior licensee.

[51 FR 14998, Apr. 22, 1986, as amended at 51 FR 36014, Oct. 8, 1986; 53 FR 1024, Jan. 15, 1988; 54 FR 4030, Jan. 27, 1989; 54 FR 39740, Sept. 28, 1989; 56 FR 19602, Apr. 29, 1991; 56 FR 65859, Dec. 19, 1991; 57 FR 48739, Oct. 28, 1992; 57 FR 60135, Dec. 18, 1992; 58 FR 62291, Nov. 26, 1993; 60 FR 37261, July 19, 1995; 62 FR 18925, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18925, Apr. 17, 1997, § 90.175 was amended by removing the last sentence of the introductory text and paragraph (g), redesignating paragraphs (b) through (f) as paragraphs (e) through (i) respectively, redesignating paragraph (a) as paragraph (b), adding new paragraphs (a), (c), and (d), and revising newly redesignated paragraphs (b) and (e), (i)(3), and (i)(5), and the first sentence of newly redesignated paragraph (g), effective Oct. 17, 1997.

§ 90.176 Coordinator notification requirements on frequencies below 512 MHz.

(a) *Frequencies below 470 MHz.* Within one business day of making a frequency recommendation, each frequency coordinator must notify and provide the information indicated in paragraph (e) of this section to all other frequency coordinators who are also certified to coordinate that frequency.

(1) The applicable frequency coordinator for each frequency is specified in

the coordinator column of the frequency tables of §§ 90.20(c)(3) and 90.35(b)(3).

(2) For frequencies that do not specify any frequency coordinator, all certified in-pool coordinators must be notified.

(3) For frequencies that are shared between the Public Safety Pool and the Industrial/Business Pool (frequencies subject to §§ 90.20(d)(7), (d)(25), (d)(34), or (d)(46) in the Public Safety Pool, and subject to §§ 90.35(c)(13), (c)(25), or (d)(4) in the Industrial/Business Pool), all certified coordinators of both pools must be notified.

(b) *Frequencies in the 470-512 MHz band.* Within one business day of making a frequency recommendation, each frequency coordinator must notify and provide the information indicated in paragraph (e) of this section to all other certified frequency coordinators in the Public Safety Pool and the Industrial/Business Pool.

(c) Each frequency coordinator must also notify all other certified in-pool coordinators on any day that the frequency coordinator does not make any frequency recommendations.

(d) Notification must be made to all coordinators at approximately the same time and can be made using any method that ensures compliance with the one business day requirement.

(e) At a minimum the following information must be included in each notification:

- (1) Name of applicant;
- (2) Frequency or frequencies recommended;
- (3) Antenna locations and heights;
- (4) Effective radiated power (ERP);
- (5) Type(s) of emissions;
- (6) Description of the service area; and
- (7) Date and time of recommendation.

(f) Upon request, each coordinator must provide any additional information requested from another certified coordinator regarding a pending recommendation that it has processed but has not yet been granted by the Commission.

(g) It is the responsibility of each coordinator to insure that its frequency recommendations do not conflict with the frequency recommendations of any

other frequency coordinator. Should a conflict arise, the affected coordinators are jointly responsible for taking action to resolve the conflict, up to and including notifying the Commission that an application may have to be returned.

[62 FR 18926, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18926, Apr. 17, 1997, § 90.176 was revised, effective Oct. 17, 1997.

§ 90.177 Protection of certain radio receiving locations.

This section pertains to applications for new or modified authorizations in the vicinity of the National Radio Astronomy Observatory, Green Bank, Pocahontas County, WV, the Naval Radio Research Observatory, Sugar Grove, Pendleton County, WV, the Table Mountain Radio receiving zone, Boulder, CO, the Federal Communications Commission monitoring stations and other protected sites.

(a) Any applicant for a new permanent base or fixed station, or for a modification of an existing authorization which would change the frequency, power, antenna height, directivity, or location within the boundaries described in paragraph (b) of this section shall notify the Director, National Radio Astronomy Observatory, P.O. Box 2, Green Bank, WV 24944, in writing, of the technical parameters of the proposal.

(1) The notification shall be made prior to, or simultaneously with the filing of the application with the Commission.

(2) The notification shall state the geographical coordinates of the antenna, antenna height, antenna directivity, proposed frequency, type of emission, and effective radiated power.

(3) After receipt of such applications, the Commission will allow a period of 20 days for comments or objections in response to the notifications indicated. If an objection to the proposed operation is received during the 20-day period from the National Radio Astronomy Observatory for itself or on behalf of the Naval Radio Research Observatory, the Commission will consider all aspects of the problem and take whatever action is deemed appropriate.

(4) The provisions of this paragraph do not apply to applications for mobile, temporary base, or temporary fixed stations.

(b) The area of concern for the National Radio Astronomy Observatory or the Naval Radio Research Observatory is the area bounded by 39°15' N. on the north, 78°30' W. on the east, 37°30' N. on the south, and 80°30' W. on the west.

(c) Protection for Table Mountain Radio Receiving Zone, Boulder County, Colorado. Applicants for a station authorization to operate in the vicinity of Boulder County, Colorado under this part are advised to give due consideration, prior to filing applications, to the need to protect the Table Mountain Radio Receiving Zone from harmful interference. These are the research laboratories of the Department of Commerce, Boulder County, CO. To prevent degradation of the present ambient radio signal level at the site, the Department of Commerce seeks to ensure that the field strengths of any radiated signals (excluding reflected signals) received on this 1800 acre site (in the vicinity of coordinates 40°07'50" N Latitude, 105° 14'40" W Longitude) resulting from new assignments (other than mobile stations) or from the modification or relocation of existing facilities do not exceed the following values:

Frequency range	Field strength (millivolt per meter) in authorized bandwidth of service	Power flux density ¹ (dBW per square meter) in authorized bandwidth of service
Below 540 kHz	10	65.8
540 to 1600 kHz	20	59.8
1.6 to 470 MHz	10	65.8
470 to 890 MHz	30	56.2
Above 890 MHz	1	85.8

¹ Equivalent values of power flux density are calculated assuming free space characteristic impedance of $376.7=120\pi$ ohms.

(1) Advance consultation is recommended particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figures in the above table would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determin-

ing whether coordination is recommended:

(i) All stations within 2.4 km (1.5 statute miles);

(ii) Stations within 4.8 km (3 statute miles) with 50 watts or more effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Table Mountain Radio Receiving Zone;

(iii) Stations within 16 km (10 statute miles) with 1 kW or more ERP in the primary plane of polarization in the azimuthal direction of the Table Mountain Receiving Zone;

(iv) Stations within 80 km (50 statute miles) with 25 kW or more ERP in the primary plane of polarization in the azimuthal direction of the Table Mountain Receiving Zone.

(2) Applicants concerned are urged to communicate with the Radio Frequency Management Coordinator, Department of Commerce, Research Support Services, NOAA R/E5X2, Boulder Laboratories, Boulder, CO 80303; telephone (303) 497-6548, in advance of filing their applications with the Commission.

(3) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Department of Commerce or proceedings to modify any authorization which may be granted which, in fact, delivers a signal at the site in excess of the field strength specified herein.

(d) Protection for Federal Communications Commission monitoring stations:

(1) Applicants in the vicinity of an FCC monitoring station for a radio station authorization to operate new transmitting facilities or changed transmitting facilities which would increase the field strength produced over the monitoring station over that previously authorized are advised to give consideration, prior to filing applications, to the possible need to protect the FCC stations from harmful interference. Geographical coordinates of the facilities which require protection are listed in §0.121(c) of the Commission's Rules. Applications for stations (except mobile stations) which will

produce on any frequency a direct wave fundamental field strength of *greater than 10 mV/m* in the authorized bandwidth of service (-65.8 dBW/m² power flux density assuming a free space characteristic impedance of 120 times pi, or 377, ohms) at the referenced coordinates, may be examined to determine extent of possible interference. Depending on the theoretical field strength value and existing root-sum-square or other ambient radio field signal levels at the indicated coordinates, a clause protecting the monitoring station may be added to the station authorization.

(2) In the event that calculated value of expected field exceeds 10 mV/m (-65.8 dBW/m²) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. Prospective applicants may communicate with: Chief, Compliance and Information Bureau, Federal Communications Commission, Washington, DC 20554, Telephone (202) 632-6980.

(3) Advance consultation is suggested particularly for those applicants who have no reliable data which indicates whether the field strength or power flux density figure indicated would be exceeded by their proposed radio facilities (except mobile stations). In such instances, the following is a suggested guide for determining whether an applicant should coordinate:

(i) All stations within 2.4 kilometers (1.5 statute miles);

(ii) Stations within 4.8 kilometers (3 statute miles) with 50 watts or more average effective radiated power (ERP) in the primary plane of polarization in the azimuthal direction of the Monitoring Stations;

(iii) Stations within 16 kilometers (10 statute miles) with 1 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station;

(iv) Stations within 80 kilometers (50 statute miles) with 25 kW or more average ERP in the primary plane of polarization in the azimuthal direction of the Monitoring Station.

(4) Advance coordination for stations operating above 1000 MHz is rec-

ommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in §0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (d)(2) and (3) of this section.

(5) The Commission will not screen applications to determine whether advance consultation has taken place. However, applicants are advised that such consultation can avoid objections from the Federal Communications Commission or modification of any authorization which will cause harmful interference.

(e) In the band 420 to 450 MHz, applicants should not expect to be accommodated if their area of service is within 160 kilometers (100 miles) of the following locations:

- (1) 45°45' N., 70°32' W,
- (2) 64°17' N., 149°10' W,
- (3) 48°43' N., 97°54' W;

within 200 kilometers (124 miles) of the following locations:

- (1) 32°38' N., 83°35' W,
- (2) 31°25' N., 100°24' W;

within 240 kilometers (150 miles) of the following location:

- (1) 39°08' N., 121°26' W;

within 320 kilometers (200 miles) of the following locations:

- (1) 28°21' N., 80°43' W,
- (2) 30°30' N., 86°30' W,
- (3) 43°09' N., 119°11' W;

or in the following locations:

- (1) The state of Arizona,
- (2) The state of Florida,
- (3) Portions of California and Nevada south of 37°10' N,
- (4) And portions of Texas and New Mexico bounded by 31°45' N., 34°30' N., 104°00' W. and 107°30' W.

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083; 47 U.S.C. 154, 303, 307)

[43 FR 54791, Nov. 22, 1978, as amended at 44 FR 77167, Dec. 31, 1979; 47 FR 34420, Aug. 9, 1982; 49 FR 32770, Aug. 16, 1984; 50 FR 39003, Sept. 25, 1985; 54 FR 38680, Sept. 20, 1989; 54 FR 39740, Sept. 28, 1989; 61 FR 8478, Mar. 5, 1996]

§90.179 Shared use of radio stations.

Licensees of radio stations authorized under this rule part may share the

use of their facilities. A station is shared when persons not licensed for the station control the station for their own purposes pursuant to the licensee's authorization. Shared use of a radio station may be either on a non-profit cost shared basis or on a for-profit private carrier basis. Shared use of an authorized station is subject to the following conditions and limitations:

(a) Persons may share a radio station only on frequencies for which they would be eligible for a separate authorization.

(b) The licensee of the shared radio station is responsible for assuring that the authorized facility is used only by persons and only for purposes consistent with the requirements of this rule part.

(c) Participants in the sharing arrangement may obtain a license for their own mobile units (including control points and/or control stations for control of the shared facility), or they may use mobile stations, and control stations or control points authorized to the licensee.

(d) If the licensee shares the land station on a non-profit, cost shared basis to the licensee, this shared use must be pursuant to a written agreement between the licensee and each participant which sets out (1) the method of operation, (2) the components of the system which are covered by the sharing arrangements, (3) the method by which costs are to be apportioned, and (4) acknowledgement that all shared transmitter use must be subject to the licensee's control. These agreements must be kept as part of the station records.

(e) If the land station which is being shared is interconnected with the public switched telephone network, the provisions of § 90.477 *et seq.* apply.

(f) Above 800 MHz, shared use on a for-profit private carrier basis is permitted only by SMR, Private Carrier Paging, and LMS licensees. See subparts M, P, and S of this part.

(g) The provisions of this section do not apply to licensees authorized to

provide commercial mobile radio service under this part.

[48 FR 26620, June 9, 1983, as amended at 51 FR 36014, Oct. 8, 1986; 53 FR 12156, Apr. 13, 1988; 54 FR 4030, Jan. 27, 1989; 54 FR 38681, Sept. 20, 1989; 57 FR 48739, Oct. 28, 1992; 59 FR 59965, Nov. 21, 1994; 60 FR 15252, Mar. 23, 1995]

§ 90.185 Multiple licensing of radio transmitting equipment in the mobile radio service.

Two or more persons eligible for licensing under this rule part may be licensed for the same land station under the following terms and conditions.

(a) Each licensee complies with the general operating requirements set out in § 90.403 of the rules.

(b) Each licensee is eligible for the frequency(ies) on which the land station operates.

(c) If the multiple licensed base station is interconnected with the public switched telephone network, the provisions of § 90.477 *et seq.* apply.

[48 FR 26621, June 9, 1983]

§ 90.187 Trunking in the bands between 150 and 512 MHz.

(a) Applicants for trunked systems operating on frequencies between 150 and 512 MHz (except 220–222 MHz) must indicate on their applications (class of station code, see § 1.952 of this chapter or Instructions for FCC Form 600) that their system will be trunked. Licensees of stations that are not trunked, may trunk their systems only after modifying their license (See § 90.135).

(b) In the bands between 150 and 512 MHz, trunking may be authorized under the following conditions:

(1) Where applicants for or licensees operating in the 470–512 MHz band meet the loading requirements of § 90.313 and have exclusive use of their frequencies in their service area.

(2) Trunking will be permitted on frequencies where an applicant or licensee does not have an exclusive service area, provided that all frequency coordination requirements are complied with and consent is obtained from all licensees pursuant to paragraphs (b)(2)(i), (b)(2)(ii), and (b)(2)(iii) of this section.

(i) Stations that have operating frequencies (base and mobile) that are 15

kHz or less removed from proposed stations that will operate with a 25 kHz channel bandwidth; stations that have operating frequencies (base and mobile) that are 7.5 kHz or less removed from proposed stations that will operate with a 12.5 kHz bandwidth; or stations that have operating frequencies (base and mobile) 3.75 kHz or less removed from proposed stations that will operate with a 6.25 kHz bandwidth; and

(ii) Stations with service areas (37 dBu contour for stations in the 150–174 MHz band and 39 dBu contour for stations in the 421–512 MHz bands; See § 90.205) that overlap a circle with radius 113 km (70 mi.) from the proposed base station. Alternatively, applicants may submit an engineering analysis based upon generally accepted engineering practices and standards which demonstrates that the service area of the trunked system does not overlap any existing stations whose service areas overlap a circle with radius 113 km (70 mi.) from the proposed base station.

(iii) The consensual agreements among licensees must specifically state the terms agreed upon and a statement must be submitted to the Commission indicating that all licensees have consented to the use of trunking. If a licensee has agreed to the use of trunking, but later decides against the use of trunking, the licensee may request that the licensee(s) of the trunked system reconsider the use of trunking. If the licensee is unable to reach an agreement with the licensee(s) of the trunked system, the licensee may request that the Commission consider the matter and assign it another channel. New licensees will only be assigned the same channel as a trunked system, if the new licensee reaches an agreement with the licensee(s) of the trunked system.

(c) Trunking of systems licensed on paging-only channels or licensed in the Radiolocation Service (subpart F) is not permitted.

[62 FR 18926, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18926, Apr. 17, 1997, § 90.187 was added, effective Oct. 17, 1997.

Subpart I—General Technical Standards

§ 90.201 Scope.

This subpart sets forth the general technical requirements for use of frequencies and equipment in the radio services governed by this part. Such requirements include standards for acceptability of equipment, frequency tolerance, modulation, emissions, power, and bandwidths. Special additional technical standards applicable to certain frequency bands and certain specialized uses are set forth in subparts J, K, and N.

[43 FR 54791, Nov. 22, 1978, as amended at 54 FR 4030, Jan. 27, 1989]

§ 90.203 Type acceptance required.

(a) Except as specified in paragraph (b) of this section, each transmitter utilized for operation under this part and each transmitter marketed as set forth in § 2.803 (of part 2) must be of a type which is included in the Commission's current Radio Equipment List as type accepted for use under this part; or, be of a type which has been type accepted by the Commission for use under this part in accordance with the procedures in paragraph (a)(2) of this section.

(1) The Commission periodically publishes a list of equipment entitled "Radio Equipment List, Equipment Acceptable for Licensing." Copies of this list are available for public reference at the Commission's offices in Washington, D.C., and at each of its field offices. This list includes type accepted and, also, until such time as it may be removed by Commission action, other equipment which appeared in this list on May 16, 1955.

(2) Any manufacturer of radio transmitting equipment (including signal boosters) to be used in these services may request type acceptance for such equipment following the procedures set forth in subpart J of part 2 of this chapter. Type acceptance for an individual transmitter or signal booster also may be requested by an applicant for a station authorization by following the procedure set forth in part 2 of this chapter. Such equipment if approved or accepted will not normally

be included in the Commission's "Radio Equipment List" but will be individually enumerated on the station authorization.

(b) Type acceptance is not required for the following:

(1) Transmitters used in developmental operations in accordance with subpart Q.

(2) Transmitters used for police zone and interzone stations authorized as of January 1, 1965.

(3) Transmitting equipment used in the band 1427–1435 MHz.

(4) Transmitters used in radiolocation stations in accordance with subpart F authorized prior to January 1, 1974, for public safety and land transportation applications (old parts 89 and 93).

(5) Transmitters used in radiolocation stations in accordance with subpart F authorized for industrial applications (old part 91) prior to January 1, 1978.

(6) [Reserved]

(7) Transmitters imported and marketed prior to September 1, 1996 for use by LMS systems.

(c) Radiolocation transmitters for use in public safety and land transportation applications marketed prior to January 1, 1974, must meet the applicable technical standards in this part, pursuant to § 2.805 of this chapter.

(d) Radiolocation transmitters for use in public safety and land transportation applications marketed after January 1, 1974, must comply with the requirements of paragraph (a) of this section.

(e) Except as provided in paragraph (g) of this section, transmitters designed to operate above 25 MHz shall not be type accepted for use under this part if the operator can program and transmit on frequencies, other than those programmed by the manufacturer, service or maintenance personnel, using the equipment's external operation controls.

(f) Except as provided in paragraph (g) of this section, transmitters designed to operate above 25 MHz that have been type accepted prior to January 15, 1988, and that permit the operator, by using external controls, to program the transmitter's operating frequencies, shall not be manufactured in,

or imported into the United States after March 15, 1988. Marketing of these transmitters shall not be permitted after March 15, 1989.

(g) Transmitters having frequency programming capability and that are designed to operate above 25 MHz are exempt from paragraphs (e) and (f) of this section if the design of such transmitters:

(1) Is such that transmitters with external controls normally available to the operator must be internally modified to place the equipment in the programmable mode. Further, while in the programmable mode, the equipment shall not be capable of transmitting. The procedures for making the modification and altering the frequency program shall not be made available with the operating information normally supplied to the end user of the equipment; or

(2) Requires the transmitter to be programmed for frequencies through controls normally inaccessible to the operator; or

(3) Requires equipment to be programmed for frequencies through use of external devices or specifically programmed modules made available only to service/maintenance personnel; or

(4) Requires equipment to be programmed through cloning (copying a program directly from another transmitter) using devices and procedures made available only to service/maintenance personnel.

(h) The requirements of paragraphs (e), (f), and (g) of this section shall not apply if:

(1) The equipment has been designed and manufactured specifically for aircraft use; and

(2) The part 90 type acceptance limits the use of the equipment to operations only under § 90.423.

(i) Equipment type accepted after February 16, 1988 and marketed for public safety operation in the 821–824/866–869 MHz bands must have the capability to be programmed for operation on the mutual aid channels as designated in § 90.617(a) of the Rules.

(j) Except where otherwise specifically provided for, transmitters operating on frequencies in the 150–174 MHz and 421–512 MHz bands must comply with the following.

(1) [Reserved]

(2) Applications for type acceptance received on or after February 14, 1997 will only be granted for equipment with the following channel bandwidths:

(i) 12.5 kHz or less for single bandwidth mode equipment or multi-bandwidth mode equipment with a maximum channel bandwidth of 12.5 kHz;

(ii) 25 kHz for multi-bandwidth mode equipment with a maximum channel bandwidth of 25 kHz if it is capable of operating on channels of 12.5 kHz or less; and

(iii) 25 kHz if the equipment meets the efficiency standard of paragraph (j)(3) of this section.

(3) Applications for part 90 type acceptance of transmitters designed to operate on frequencies in the 150–174 MHz and/or 421–512 MHz bands, received on or after February 14, 1997, must include a certification that the equipment meets a spectrum efficiency standard of one voice channel per 12.5 kHz of channel bandwidth. Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of more than 6.25 kHz, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.

(4) Applications for type acceptance received on or after January 1, 2005, except for hand-held transmitters with an output power of two watts or less, type acceptance will only be granted for equipment with the following channel bandwidths:

(i) 6.25 kHz or less for single bandwidth mode equipment;

(ii) 12.5 kHz for multi-bandwidth mode equipment with a maximum channel bandwidth of 12.5 kHz if it is capable of operating on channels of 6.25 kHz or less;

(iii) 25 kHz for multi-bandwidth mode equipment with a maximum channel bandwidth of 25 kHz if it is capable of operating on channels of 6.25 kHz or less; and

(iv) Up to 25 kHz if the equipment meets the efficiency standard of paragraph (j)(5) of this section.

(5) Applications for part 90 type acceptance of transmitters designed to operate on frequencies in the 150–174

MHz and/or 421–512 MHz bands, received on or after January 1, 2005, must include a certification that the equipment meets a spectrum efficiency standard of one voice channel per 6.25 kHz of channel bandwidth. Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of more than 6.25 kHz, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.

(6) Modification and permissive changes to type acceptance grants.

(i) The Commission's Equipment Authorization Division will not allow adding a multi-mode or narrowband operation capability to single bandwidth mode transmitters, except under the following conditions:

(A) Transmitters that have the inherent capability for multi-mode or narrowband operation allowed in paragraphs (j)(2) and (j)(4) of this section, may have their grant of Type Acceptance modified (reissued) upon demonstrating that the original unit complies with the technical requirements for operation; and

(B) New FCC Identifiers will be required to identify equipment that needs to be modified to comply with the requirements of paragraphs (j)(2) and (j)(4) of this section.

(ii) All other applications for modification or permissive changes will be subject to the Rules of part 2 of this chapter.

(7) Transmitters designed for one-way paging operations will be type accepted with a 25 kHz channel bandwidth and are exempt from the spectrum efficiency requirements of paragraphs (j)(3) and (j)(5) of this section.

(8) The Commission's Equipment Authorization Division may, on a case by case basis, grant type acceptance to equipment with slower data rates than specified in paragraphs (j)(3) and (j)(5) of this section, provided that a technical analysis is submitted with the application which describes why the slower data rate will provide more spectral efficiency than the standard data rate.

(9) Transmitters used for stolen vehicle recovery on 173.075 MHz must comply with the requirements of § 90.20(e)(6).

(k)(1) For transmitters operating on frequencies in the 220–222 MHz band, type acceptance will only be granted for equipment with channel bandwidths up to 5 kHz, except that type acceptance will be granted for equipment operating on 220–222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz if the equipment meets the following spectrum efficiency standard: Applications for part 90 type acceptance of transmitters designed to operate on frequencies in the 220–222 MHz band must include a statement that the equipment meets a spectrum efficiency standard of at least one voice channel per 5 kHz of channel bandwidth (for voice communications), and a data rate of at least 4,800 bits per second per 5 kHz of channel bandwidth (for data communications). Type acceptance for transmitters operating on 220–222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz will be granted without the requirement that a statement be included that the equipment meets the spectrum efficiency standard if the requests for type acceptance of such transmitters are filed after December 31, 2001.

(2) Type acceptance may be granted on a case-by-case basis by the Commission's Equipment Authorization Division for equipment operating on 220–222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz and *not* satisfying the spectrum efficiency

standard identified in paragraph (k)(1) of this section, if requests for part 90 type acceptance of such transmitters are accompanied by a technical analysis that satisfactorily demonstrates that the transmitters will provide more spectral efficiency than that which would be provided by use of the spectrum efficiency standard.

[43 FR 54791, Nov. 22, 1978; 44 FR 32219, June 5, 1979, as amended at 50 FR 13606, Apr. 5, 1985; 52 FR 47570, Dec. 15, 1987; 53 FR 1024, Jan. 15, 1988; 54 FR 38681, Sept. 20, 1989; 60 FR 15252, Mar. 23, 1995; 60 FR 37261, July 19, 1995; 61 FR 18986, Apr. 30, 1996; 62 FR 2038, Jan. 15, 1997; 62 FR 15992, Apr. 3, 1997; 62 FR 18926, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18926, Apr. 17, 1997, § 90.203 was amended by removing and reserving paragraphs (b)(6) and (j)(1) and revising paragraph (j)(9) and the second sentences of paragraphs (j)(3) and (j)(5), effective Oct. 17, 1997. For the convenience of the user, the superseded text not appearing in the Oct. 1, 1996 revision is set forth as follows:

§ 90.203 Type acceptance required.

* * * * *

(j) * * *

(1) Applications for type acceptance received prior to February 14, 1997, will be granted for equipment with channel bandwidths up to 25 kHz.

* * * * *

(3) * * * Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of 6.25 kHz or more, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.

* * * * *

(5) * * * Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of 6.25 kHz or more, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.

* * * * *

(9) Transmitters used for stolen vehicle recovery on 173.075 MHz must comply with the requirements of Section 90.19(f)(7).

* * * * *

§ 90.205 Power and antenna height limits.

Applicants for licenses must request and use no more power than the actual power necessary for satisfactory operation. Except where otherwise specifically provided for, the maximum power that will be authorized to applicants whose license applications for new stations are filed after August 18, 1995 is as follows:

(a) *Below 25 MHz.* For single sideband operations (J3E emission), the maximum transmitter peak envelope power is 1000 watts.

(b) *25–50 MHz.* The maximum transmitter output power is 300 watts.

(c) *72–76 MHz.* The maximum effective radiated power (ERP) for stations operating on fixed frequencies is 300 watts. Stations operating on mobile-only frequencies are limited to one watt transmitter output power.

(d) *150–174 MHz.* (1) The maximum allowable station ERP is dependent upon the station's antenna HAAT and required service area and will be authorized in accordance with table 1. Applicants requesting an ERP in excess of that listed in table 1 must submit an engineering analysis based upon generally accepted engineering practices and standards that includes coverage

contours to demonstrate that the requested station parameters will not produce coverage in excess of that which the applicant requires.

(2) Applications for stations where special circumstances exist that make it necessary to deviate from the ERP and antenna heights in Table 1 will be submitted to the frequency coordinator accompanied by a technical analysis, based upon generally accepted engineering practices and standards, that demonstrates that the requested station parameters will not produce a signal strength in excess of 37 dBu at any point along the edge of the requested service area. The coordinator may then recommend any ERP appropriate to meet this condition.

(3) An applicant for a station with a service area radius greater than 40 km (25 mi) must justify the requested service area radius, which will be authorized only in accordance with table 1, note 4. For base stations with service areas greater than 80 km, all operations 80 km or less from the base station will be on a primary basis and all operations outside of 80 km from the base station will be on a secondary basis and will be entitled to no protection from primary operations.

TABLE 1—150–174MHz—MAXIMUM ERP/REFERENCE HAAT FOR A SPECIFIC SERVICE AREA RADIUS

	Service area radius (km)									
	3	8	13	16	24	32	40	48 ⁴	64 ⁴	80 ⁴
Maximum ERP (w) ¹	1	28	178	2500	2500	2500	500	2500	2500	2500
Up to reference HAAT (m) ³ ..	15	15	15	15	33	65	110	160	380	670

¹ Maximum ERP indicated provides for a 37 dBu signal strength at the edge of the service area per FCC Report R-6602, Fig. 19 (See § 73.699, Fig. 10).

² Maximum ERP of 500 watts allowed. Signal strength at the service area contour may be less than 37 dBu.

³ When the actual antenna HAAT is greater than the reference HAAT, the allowable ERP will be reduced in accordance with the following equation: $ERP_{allow} = ERP_{max} \times (HAAT_{ref} / HAAT_{actual})^2$.

⁴ Applications for this service area radius may be granted upon specific request with justification and must include a technical demonstration that the signal strength at the edge of the service area does not exceed 37 dBu.

(e) *220–222 MHz.* Limitations on power and antenna heights are specified in § 90.729.

(f) *421–430 MHz.* Limitations on power and antenna heights are specified in § 90.279.

(g) *450–470 MHz.* (1) The maximum allowable station effective radiated power (ERP) is dependent upon the station's antenna HAAT and required service area and will be authorized in accordance with table 2. Applicants re-

questing an ERP in excess of that listed in table 2 must submit an engineering analysis based upon generally accepted engineering practices and standards that includes coverage contours to demonstrate that the requested station parameters will not produce coverage in excess of that which the applicant requires.

(2) Applications for stations where special circumstances exist that make it necessary to deviate from the ERP

and antenna heights in Table 2 will be submitted to the frequency coordinator accompanied by a technical analysis, based upon generally accepted engineering practices and standards, that demonstrates that the requested station parameters will not produce a signal strength in excess of 39 dBu at any point along the edge of the requested service area. The coordinator may then recommend any ERP appropriate to meet this condition.

(3) An applicant for a station with a service area radius greater than 32 km (20 mi) must justify the requested service area radius, which may be authorized only in accordance with table 2, note 4. For base stations with service areas greater than 80 km, all operations 80 km or less from the base station will be on a primary basis and all operations outside of 80 km from the base station will be on a secondary basis and will be entitled to no protection from primary operations.

TABLE 2—450–470 MHz—MAXIMUM ERP/REFERENCE HAAT FOR A SPECIFIC SERVICE AREA RADIUS

	Service area radius (km)									
	3	8	13	16	24	32	40 ⁴	48 ⁴	64 ⁴	80 ⁴
Maximum ERP (w) ¹	2	100	² 500	² 500	² 500	² 500	² 500	² 500	² 500	² 500
Up to reference HAAT (m) ³ ..	15	15	15	27	63	125	250	410	950	2700

¹ Maximum ERP indicated provides for a 39 dBu signal strength at the edge of the service area per FCC Report R-6602, Fig. 29 (See § 73.699, Fig. 10 b).

² Maximum ERP of 500 watts allowed. Signal strength at the service area contour may be less than 39 dBu.

³ When the actual antenna HAAT is greater than the reference HAAT, the allowable ERP will be reduced in accordance with the following equation: $ERP_{allow} = ERP_{max} \times (HAAT_{ref} / HAAT_{actual})^2$.

⁴ Applications for this service area radius may be granted upon specific request with justification and must include a technical demonstration that the signal strength at the edge of the service area does not exceed 39 dBu.

(h) *470–512 MHz.* Power and height limitations are specified in §§ 90.307 and 90.309.

(i) *806–824/851–869 MHz and 896–901/935–940 MHz.* Power and height limitations are specified in § 90.635.

(j) *902–928 MHz.* LMS systems operating pursuant to subpart M of this part in the 902–927.25 MHz band will be authorized a maximum of 30 watts ERP. LMS equipment operating in the 927.25–928 MHz band will be authorized a maximum of 300 watts ERP. ERP must be measured as peak envelope power. Antenna heights will be as specified in § 90.353(h).

(k) *929–930 MHz.* Limitations on power and antenna heights are specified in § 90.494.

(l) *2450–2483.5 MHz.* The maximum transmitter power is 5 watts.

(m) *All other frequency bands.* Requested transmitter power will be considered and authorized on a case by case basis.

(n) The output power shall not exceed by more than 20 percent either the output power shown in the Radio Equipment List [available in accordance with § 90.203(a)(1)] for transmitters included in this list or when not so list-

ed, the manufacturer's rated output power for the particular transmitter specifically listed on the authorization.

[60 FR 37262, July 19, 1995, as amended at 62 FR 2039, Jan. 15, 1997]

§ 90.207 Types of emissions.

Unless specified elsewhere in this part, stations will be authorized emissions as provided for in paragraphs (b) through (n) of this section.

(a) *Most common emission symbols.* For a complete listing of emission symbols allowable under this part, see § 2.201 of this chapter.

(1) The first symbol indicates the type of modulation on the transmitter carrier.

A—Amplitude modulation, double sideband with identical information on each sideband.

F—Frequency modulation.

G—Phase modulation.

J—Single sideband with suppressed carrier.

P—Unmodulated pulse.

W—Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse.

(2) The second symbol indicates the type of signal modulating the transmitter carrier.

0—No modulation.

1—Digital modulation, no subcarrier.

2—Digital modulation, modulated subcarrier.

3—Analog modulation.

(3) The third symbol indicates the type of transmitted information.

A—Telegraphy for aural reception.

B—Telegraphy for machine reception.

C—Facsimile.

D—Data, telemetry, and telecommand.

E—Voice.

N—No transmitted information.

W—Combination of the above.

(b) Authorizations to use A3E, F3E, or G3E emission also include the use of emissions for tone signals or signaling devices whose sole functions are to establish an to maintain communications, to provide automatic station identification, and for operations in the Public Safety Pool, to activate emergency warning devices used solely for the purpose of advising the general public or emergency personnel of an impending emergency situation.

(c) The use of F3E or G3E emission in these services will be authorized only on frequencies above 25 MHz.

(d) Except for Traveler's Information stations in the Public Safety Pool authorized in accordance with §90.242, only J3E emission will be authorized for telephony systems on frequencies below 25 MHz.

(e) For non-voice paging operations, only A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, or G2D emissions will be authorized.

(f) For radioteleprinter operations that may be authorized in accordance with §90.237, only F1B, F2B, G1B or G2B emissions will be authorize above 25 MHz, and A1B or A2B emissions below 25 MHz.

(g) For radiofacsimile operations that may be authorized in accordance with §90.237, only F3C or G3C emissions will be authorized above 25 MHz, and A3C emissions below 25 MHz.

(h) [Reserved]

(i) For telemetry operations, when specifically authorized under this part, only A1D, A2D, F1D, or F2D emissions will be authorized.

(j) For call box operations that may be authorized in accordance with §90.241, only A1A, A1D, A2B, A2D, F1B, F1D, F2B, F2D, G1B, G1D, G2B, G2D, F3E or G3E emissions will be authorized.

(k) For radiolocation operations as may be authorized in accordance with subpart F, unless otherwise provided for any type of emission may be authorized upon a satisfactory showing of need.

(l) For stations in the Public Safety and Industrial/Business Pools utilizing digital voice modulation, in either the scrambled or unscrambled mode, F1E or G1E emission will be authorized. Authorization to use F3Y emission is construed to include the use of F1D, F2D, G1D, or G2D emission subject to the provisions of §90.233.

(m) For narrowband operations in a 3.6 kHz maximum authorized bandwidth, any modulation type may be used which complies with the emission limitations of §90.209.

(n) *Other emissions.* Requests for emissions other than those listed in paragraphs (c) through (e) of this section will be considered on a case-by-case basis to ensure that the requested emission will not cause more interference than other currently permitted emissions.

[49 FR 48711, Dec. 14, 1984, as amended at 50 FR 13606, Apr. 5, 1985; 50 FR 25240, June 18, 1985; 52 FR 29856, Aug. 12, 1987; 54 FR 38681, Sept. 20, 1989; 60 FR 15252, Mar. 23, 1995; 60 FR 37263, July 19, 1995; 62 FR 2039, Jan. 15, 1997; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, §90.207 was amended by revising paragraphs (b) and (d) and the first sentence of paragraph (l), effective Oct. 17, 1997.

§90.209 Bandwidth limitations.

(a) Each authorization issued to a station licensed under this part will show an emission designator representing the class of emission authorized. The designator will be prefixed by a specified necessary bandwidth. This number does not necessarily indicate the bandwidth occupied by the emission at any instant. In those cases where §2.202 of this chapter does not provide a formula for the computation of necessary bandwidth, the occupied bandwidth, as defined in part 2 of this

§ 90.210

chapter, may be used in lieu of the necessary bandwidth.

(b) The maximum authorized single channel bandwidth of emission corresponding to the type of emission specified in § 90.207 is as follows:

(1) For A1A or A1B emissions, the maximum authorized bandwidth is 0.25 kHz. The maximum authorized bandwidth for type A3E emission is 8 kHz.

(2) For operations below 25 MHz utilizing J3E emission, the bandwidth occupied by the emission shall not exceed 3000 Hz. The assigned frequency will be specified in the authorization. The authorized carrier frequency will be 1400 Hz lower in frequency than the assigned frequency. Only upper sideband emission may be used. In the case of regularly available double sideband radiotelephone channels, an assigned frequency for J3E emissions is available either 1600 Hz below or 1400 Hz above the double sideband radiotelephone assigned frequency.

(3) For all other types of emissions, the maximum authorized bandwidth shall not be more than that normally authorized for voice operations.

(4) Where a frequency is assigned exclusively to a single licensee, more than a single emission may be used within the authorized bandwidth. In such cases, the frequency stability requirements of § 90.213 must be met for each emission.

(5) Unless specified elsewhere, channel spacings and bandwidths that will be authorized in the following frequency bands are given in the following table.

STANDARD CHANNEL SPACING/BANDWIDTH

Frequency band (MHz)	Channel spacing (kHz)	Authorized bandwidth (kHz)
Below 25 ²		
25–50	20	20
72–76	20	20
150–174	¹ 7.5	^{1,3} 20/11.25/6
220–222	5	4
421–512 ²	¹ 6.25	^{1,3} 20/11.25/6
806–821/851–866	25	20
821–824/866–869	12.5	20
896–901/935–940	12.5	13.6
902–928 ⁴		
929–930	25	20
1427–1435 ²		
2450–2483.52 ²		
Above 2500 ²		

¹ For stations authorized on or after August 18, 1995.

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² Bandwidths for radiolocation stations in the 420–450 MHz band and for stations operating in bands subject to this footnote will be reviewed and authorized on a case-by-case basis.

³ Operations using equipment designed to operate with a 25 kHz channel bandwidth will be authorized a 20 kHz bandwidth. Operations using equipment designed to operate with a 12.5 kHz channel bandwidth will be authorized a 11.25 kHz bandwidth. Operations using equipment designed to operate with a 6.25 kHz channel bandwidth will be authorized a 6 kHz bandwidth.

⁴ The maximum authorized bandwidth shall be 12 MHz for non-multilateration LMS operations in the band 909.75–921.75 MHz and 2 MHz in the band 902.00–904.00 MHz. The maximum authorized bandwidth for multilateration LMS operations shall be 5.75 MHz in the 904.00–909.75 MHz band; 2 MHz in the 919.75–921.75 MHz band; 5.75 MHz in the 921.75–927.25 MHz band and its associated 927.25–927.50 MHz narrowband forward link; and 8.00 MHz if the 919.75–921.75 MHz and 921.75–927.25 MHz bands and their associated 927.25–927.50 MHz and 927.50–927.75 MHz narrowband forward links are aggregated.

[60 FR 37263, July 19, 1995]

§ 90.210 Emission masks.

Except as indicated elsewhere in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (m) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere in this part, the table in this section specifies the emission masks for equipment operating in the frequency bands governed under this part.

APPLICABLE EMISSION MASKS

Frequency band (MHz)	Mask for equipment with audio low pass filter	Mask for equipment without audio low pass filter
Below 25 ¹	A or B	A or C
25–50	B	C
72–76	B	C
150–174 ²	B, D, or E	C, D, or E
150 Paging-only	B	C
220–222	F	F
421–512 ²	B, D, or E	C, D, or E
450 Paging-only	B	G
806–821/851–866 ³	B	G
821–824/866–869	B	H
896–901/935–940	I	J
902–928	K	K
929–930	B	G
Above 940	B	C

APPLICABLE EMISSION MASKS—Continued

Frequency band (MHz)	Mask for equipment with audio low pass filter	Mask for equipment without audio low pass filter
All other bands	B	C

¹ Equipment using single sideband J3E emission must meet the requirements of Emission Mask A. Equipment using other emissions must meet the requirements of Emission Mask B or C, as applicable.

² Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask B or C, as applicable. Equipment designed to operate with a 12.5 kHz channel bandwidth must meet the requirements of Emission Mask D, and equipment designed to operate with a 6.25 kHz channel bandwidth must meet the requirements of Emission Mask E.

³ Equipment used in this band licensed to EA or non-EA systems shall comply with the emission mask provisions of § 90.691.

(a) *Emission Mask A.* For transmitters utilizing J3E emission, the carrier must be at least 40 dB below the peak envelope power and the power of emissions must be reduced below the output power (P in watts) of the transmitter as follows:

(1) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 150 percent of the authorized bandwidth: At least 25 dB.

(2) On any frequency removed from the assigned frequency by more than 150 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.

(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log P$ dB.

(b) *Emission Mask B.* For transmitters that are equipped with an audio low-pass filter pursuant to § 90.211(a), the power of any emission must be below the unmodulated carrier power (P) as follows:

(1) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.

(2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.

(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log (P)$ dB.

(c) *Emission Mask C.* For transmitters that are not equipped with an audio

low-pass filter pursuant to § 90.211(b), the power of any emission must be attenuated below the unmodulated carrier output power (P) as follows:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz, but not more than 10 kHz: At least $83 \log (f_d/5)$ dB;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 10 kHz, but not more than 250 percent of the authorized bandwidth: At least $29 \log (f_d^2/11)$ dB or 50 dB, whichever is the lesser attenuation;

(3) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log (P)$ dB.

(d) *Emission Mask D—12.5 kHz channel bandwidth equipment.* For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

(1) On any frequency from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 : Zero dB.

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: At least $7.27(f_d - 2.88 \text{ kHz})$ dB.

(3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: At least $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.

(4) The reference level for showing compliance with the emission mask shall be established using a resolution bandwidth sufficiently wide (usually two to three times the channel bandwidth) to capture the true peak emission of the equipment under test. In order to show compliance with the emissions mask up to and including 50 kHz removed from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to insure that the

emission profile is developed. If video filtering is used, its bandwidth must not be less than the instrument resolution bandwidth. For emissions beyond 50 kHz from the edge of the authorized bandwidth, see paragraph (m) of this section. If it can be shown that use of the above instrumentation settings do not accurately represent the true interference potential of the equipment under test, then an alternate procedure may be used provided prior Commission approval is obtained.

(e) *Emission Mask E—6.25 kHz or less channel bandwidth equipment.* For transmitters designed to operate with a 6.25 kHz or less bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

(1) On any frequency from the center of the authorized bandwidth f_0 to 3.0 kHz removed from f_0 : Zero dB.

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 3.0 kHz but no more than 4.6 kHz: At least $30 + 16.67(f_d - 3 \text{ kHz})$ or $55 + 10 \log (P)$ or 65 dB, whichever is the lesser attenuation.

(3) On any frequency removed from the center of the authorized bandwidth by more than 4.6 kHz: At least $55 + 10 \log (P)$ or 65 dB, whichever is the lesser attenuation.

(4) The reference level for showing compliance with the emission mask shall be established using a resolution bandwidth sufficiently wide (usually two to three times the channel bandwidth) to capture the true peak emission of the equipment under test. In order to show compliance with the emissions mask up to and including 50 kHz removed from the edge of the authorized bandwidth, adjust the resolution bandwidth to 100 Hz with the measuring instrument in a peak hold mode. A sufficient number of sweeps must be measured to insure that the emission profile is developed. If video filtering is used, its bandwidth must not be less than the instrument resolution bandwidth. For emissions beyond 50 kHz from the edge of the authorized bandwidth, see paragraph (m) of this section. If it can be shown that use of the above instrumentation settings do

not accurately represent the true interference potential of the equipment under test, then an alternate procedure may be used provided prior Commission approval is obtained.

(f) *Emission Mask F.* For transmitters operating in the 220–222 MHz frequency band, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

(1) On any frequency from the center of the authorized bandwidth f_0 to the edge of the authorized bandwidth f_e : Zero dB.

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 2 kHz up to and including 3.75 kHz: $30 + 20(f_d - 2)$ dB or $55 + 10 \log (P)$, or 65 dB, whichever is the lesser attenuation.

(3) On any frequency beyond 3.75 kHz removed from the center of the authorized bandwidth f_d : At least $55 + 10 \log (P)$ dB.

(g) *Emission Mask G.* For transmitters that are not equipped with an audio low-pass filter pursuant to § 90.211(b), the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz, but no more than 10 kHz: At least $83 \log (f_d/5)$ dB;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 10 kHz, but no more than 250 percent of the authorized bandwidth: At least $116 \log (f_d/6.1)$ dB, or $50 + 10 \log (P)$ dB, or 70 dB, whichever is the lesser attenuation;

(3) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log (P)$ dB.

(h) *Emission Mask H.* For transmitters that are not equipped with an audio low-pass filter pursuant to § 90.211(b), the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

(1) On any frequency removed from the center of the authorized bandwidth

by a displacement frequency (f_d in kHz) of 4 kHz or less: Zero dB.

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 4 kHz, but no more than 8.5 kHz: At least $107 \log (f_d/4)$ dB;

(3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 8.5 kHz, but no more than 15 kHz: At least $40.5 \log (f_d/1.16)$ dB;

(4) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 15 kHz, but no more than 25 kHz: At least $116 \log (f_d/6.1)$ dB;

(5) On any frequency removed from the center of the authorized bandwidth by more than 25 kHz: At least $43 + \log (P)$ dB.

(i) *Emission Mask I.* For transmitters that are equipped with an audio low pass filter pursuant to §90.211(a), the power of any emission must be attenuated below the unmodulated carrier power of the transmitter (P) as follows:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency of more than 6.8 kHz, but no more than 9.0 kHz: At least 25 dB;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency of more than 9.0 kHz, but no more than 15 kHz: At least 35 dB;

(3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency of more than 15 kHz: At least $43 + 10 \log (P)$ dB, or 70 dB, whichever is the lesser attenuation.

(j) *Emission Mask J.* For transmitters that are not equipped with an audio low-pass filter pursuant to §90.211(b), the power of any emission must be attenuated below the unmodulated carrier power of the transmitter (P) as follows:

(1) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 2.5 kHz, but no more than 6.25 kHz: At least $53 \log (f_d/2.5)$ dB;

(2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz)

of more than 6.25 kHz, but no more than 9.5 kHz: At least $103 \log (f_d/3.9)$ dB;

(3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 9.5 kHz: At least $157 \log (f_d/5.3)$ dB, or $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.

(k) *Emission Mask K—(1) Wideband multilateration transmitters.* For transmitters authorized under subpart M to provide forward or reverse links in a multilateration system in the subbands 904–909.75 MHz, 921.75–927.25 MHz and 919.75–921.75 MHz, and which transmit an emission occupying more than 50 kHz bandwidth: in any 100 kHz band, the center frequency of which is removed from the center of authorized sub-band(s) by more than 50 percent of the authorized bandwidth, the power of emissions shall be attenuated below the transmitter output power, as specified by the following equation, but in no case less than 31 dB:

$A = 16 + 0.4 (D - 50) + 10 \log B$ (attenuation greater than 66 dB is not required)

Where:

A=attenuation (in decibels) below the maximum permitted output power level

D=displacement of the center frequency of the measurement bandwidth from the center frequency of the authorized sub-band, expressed as a percentage of the authorized bandwidth B

B=authorized bandwidth in megahertz.

(2) *Narrowband forward link transmitters.* For LMS multilateration narrowband forward link transmitters operating in the 927.25–928 MHz frequency band the power of any emission shall be attenuated below the transmitter output power (P) in accordance with following schedule:

On any frequency outside the authorized sub-band and removed from the edge of the authorized sub-band by a displacement frequency (f_d in kHz): at least $116 \log ((f_d+10)/6.1)$ dB or $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.

(3) *Other transmitters.* For all other transmitters authorized under Subpart M, the peak power of any emission shall be attenuated below the power of the highest emission contained within the authorized channel bandwidth in accordance with the following schedule:

(i) On any frequency within the authorized bandwidth: Zero dB;

(ii) On any frequency outside of the authorized bandwidth: $55+10\log(P)$ dB where (P) is the highest emission (watts) of the transmitter inside the authorized bandwidth.

(4) The resolution bandwidth of the instrumentation used to measure the emission power shall be 100 kHz, except that, in regard to paragraph (2) of this section, a minimum spectrum analyzer resolution bandwidth of 300 Hz shall be used for measurement center frequencies within 1 MHz of the edge of the authorized subband. If a video filter is used, its bandwidth shall not be less than the resolution bandwidth.

(5) Emission power shall be measured in peak values.

(l) *Other frequency bands.* Transmitters designed for operation under this part on frequencies other than listed in this section must meet the emission mask requirements of Emission Mask B. Equipment operating under this part on frequencies allocated to but shared with the Federal Government, must meet the applicable Federal Government technical standards.

(m) *Instrumentation.* The reference level for showing compliance with the emission mask shall be established, except as indicated in §§ 90.210 (d), (e), and (k), using standard engineering practices for the modulation characteristic used by the equipment under test. When measuring emissions in the 150–174 MHz and 421–512 MHz the following procedures will apply. A sufficient number of sweeps must be measured to insure that the emission profile is developed. If video filtering is used, its bandwidth must not be less than the instrument resolution bandwidth. For frequencies more than 50 kHz removed from the edge of the authorized bandwidth a resolution of at least 10 kHz must be used for frequencies below 1000 MHz. Above 1000 MHz the resolution bandwidth of the instrumentation must be at least 1 MHz. If it can be shown that use of the above instrumentation settings do not accurately represent the true interference potential of the equipment under test, then an alternate procedure may be used pro-

vided prior Commission approval is obtained.

[60 FR 37264, July 19, 1995, as amended at 61 FR 4235, Feb. 5, 1996; 61 FR 6155, Feb. 16, 1996; 61 FR 18986, Apr. 30, 1996; 62 FR 41214, July 31, 1997]

§ 90.211 Modulation requirements.

Each transmitter must meet the requirements of either paragraph (a) or (b) of this section. The requirements of this paragraph do not apply to mobile stations that are authorized to operate with a maximum power output of 2 watts or less.

(a) Transmitters utilizing analog emissions that are equipped with an audio low-pass filter must meet the emission limitations specified in § 90.210. Testing must be in accordance with the rules specified in part 2 of this chapter.

(b) Transmitters utilizing digital or analog emissions without an audio low-pass filter must be tested for type acceptance using the digital or analog modulating signal or signals specified by the part 2 of this chapter. The type acceptance application must contain such information as may be necessary to demonstrate that the transmitter complies with the emission limitations specified in § 90.210.

[60 FR 37266, July 19, 1995, as amended at 62 FR 2039, Jan. 15, 1997]

§ 90.212 Provisions relating to the use of scrambling devices and digital voice modulation.

(a) Analog scrambling techniques may be employed at any station authorized the use of A3E, F3E, or G3E emission, subject to the provision of paragraph (d) of this section.

(b) The use of digital scrambling techniques or digital voice modulation requires the specific authorization of F1E or G1E emission, and these emissions will only be authorized subject to the provisions of paragraph (d) of this section.

(c) The transmission of any non-voice information or data under the authorization of F1E or G1E emission is prohibited. However, stations authorized the use of F1E or G1E emission may also be authorized F1D, F2D, G1D or

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G2D emission for non-voice communication purposes, pursuant to paragraph (k) of §90.207.

(d) Station identification shall be transmitted in the unscrambled analog mode (clear voice) or Morse code in accordance with the provisions of §90.425. All digital encoding and digital modulation shall be disabled during station identification.

[43 FR 54791, Nov. 22, 1978, as amended at 47 FR 15340, Apr. 9, 1982; 49 FR 48711, Dec. 14, 1984]

§90.213 Frequency stability.

(a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

MINIMUM FREQUENCY STABILITY
[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	1,2,3 100	100	200
25–50	20	20	50
72–76	5	.....	50
150–174	5,11 5	6 5	4,6 50
220–222 ¹²	0.1	1.5	1.5
421–512	7,11,14 2.5	8 5	8 5
806–821	14 1.5	2.5	2.5
821–824	14 1.0	1.5	1.5
851–866	1.5	2.5	2.5
866–869	1.0	1.5	1.5
896–901	14 0.1	1.5	1.5
902–928	2.5	2.5	2.5
902–928 ¹³	2.5	2.5	2.5
929–930	1.5	.....	.....
935–940	0.1	1.5	1.5
1427–1435	9 300	300	300
Above 2450 ¹⁰ .....	.....	.....	.....

¹Fixed and base stations with over 200 watts transmitter power must have a frequency stability of 50 ppm except for equipment used in the Public Safety Pool where the frequency stability is 100 ppm.

²For single sideband operations below 25 MHz, the carrier frequency must be maintained within 50 Hz of the authorized carrier frequency.

³Travelers information station transmitters operating from 530–1700 kHz and transmitters exceeding 200 watts peak envelope power used for disaster communications and long distance circuit operations pursuant to §§90.242 and 90.264 must maintain the carrier frequency to within 20 Hz of the authorized frequency.

⁴Stations operating in the 154.45 to 154.49 MHz or the 173.2 to 173.4 MHz bands must have a frequency stability of 5 ppm.

⁵In the 150–174 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 2.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 1.0 ppm.

⁶In the 150–174 MHz band, mobile stations designed to operate with a 12.5 kHz channel bandwidth or designed to operate on a frequency specifically designated for itinerant use or designed for low-power operation of two watts or less, must have a frequency stability of 5.0 ppm. Mobile stations designed to operate with a 6.25 kHz channel bandwidth must have a frequency stability of 2.0 ppm.

⁷In the 421–512 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 1.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 0.5 ppm.

⁸In the 421–512 MHz band, mobile stations designed to operate with a 12.5 kHz channel bandwidth must have a frequency stability of 2.5 ppm. Mobile stations designed to operate with a 6.25 kHz channel bandwidth must have a frequency stability of 1.0 ppm.

⁹Fixed stations with output powers above 120 watts and necessary bandwidth less than 3 kHz must operate with a frequency stability of 100 ppm. Fixed stations with output powers less than 120 watts and using time-division multiplex, must operate with a frequency stability of 500 ppm.

¹⁰Frequency stability to be specified in the station authorization.

¹¹Paging transmitters operating on paging-only frequencies must operate with frequency stability of 5 ppm in the 150–174 MHz band and 2.5 ppm in the 421–512 MHz band.

¹²Mobile units may utilize synchronizing signals from associated base stations to achieve the specified carrier stability.

¹³Fixed non-multilateration transmitters with an authorized bandwidth that is more than 40 kHz from the band edge, intermittently operated hand-held readers, and mobile transponders are not subject to frequency tolerance restrictions.

¹⁴Control stations may operate with the frequency tolerance specified for associated mobile frequencies.

(b) For the purpose of determining the frequency stability limits, the power of a transmitter is considered to be the maximum rated output power as specified by the manufacturer.

[60 FR 37266, July 19, 1995, as amended at 61 FR 4235, Feb. 5, 1996; 61 FR 18986, Apr. 30, 1996; 61 FR 38403, July 24, 1996; 62 FR 2040, Jan. 15, 1997; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, §90.213 was amended by revising footnote 1 to the table in paragraph (a), effective Oct. 17, 1997.

§90.214 Transient frequency behavior.

Transmitters designed to operate in the 150–174 MHz and 421–512 MHz frequency bands must maintain transient frequencies within the maximum frequency difference limits during the time intervals indicated:

Time intervals ^{1, 2}	Maximum frequency difference ³	All equipment	
		150 to 174 MHz	421 to 512 MHz
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels			
t ₁ ⁴	± 25.0 kHz	5.0 ms	10.0 ms
t ₂	± 12.5 kHz	20.0 ms	25.0 ms

Time intervals ^{1, 2}	Maximum frequency difference ³	All equipment	
		150 to 174 MHz	421 to 512 MHz
t ₃ ⁴	± 25.0 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels			
t ₁ ⁴	± 12.5 kHz	5.0 ms	10.0 ms
t ₂	± 6.25 kHz	20.0 ms	25.0 ms
t ₃ ⁴	± 12.5 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 6.25 kHz Channels			
t ₁ ⁴	± 6.25 kHz	5.0 ms	10.0 ms
t ₂	± 3.125 kHz	20.0 ms	25.0 ms
t ₃ ⁴	± 6.25 kHz	5.0 ms	10.0 ms

¹ t_{on} is the instant when a 1 kHz test signal is completely suppressed, including any capture time due to phasing.

t₁ is the time period immediately following t_{on}.

t₂ is the time period immediately following t₁.

t₃ is the time period from the instant when the transmitter is turned off until t_{off}.

t_{off} is the instant when the 1 kHz test signal starts to rise.

² During the time from the end of t₂ to the beginning of t₃, the frequency difference must not exceed the limits specified in § 90.213.

³ Difference between the actual transmitter frequency and the assigned transmitter frequency.

⁴ If the transmitter carrier output power rating is 6 watts or less, the frequency difference during this time period may exceed the maximum frequency difference for this time period.

[62 FR 2040, Jan. 15, 1997]

§ 90.215 Transmitter measurements.

(a) The licensee of each station shall employ a suitable procedure to determine that the carrier frequency of each transmitter authorized to operate with an output power in excess of two watts is maintained within the tolerance prescribed in § 90.213. This determination shall be made, and the results entered in the station records in accordance with the following:

(1) When the transmitter is initially installed;

(2) When any change is made in the transmitter which may affect the carrier frequency or its stability.

(b) The licensee of each station shall employ a suitable procedure to determine that each transmitter authorized to operate with an output power in excess of two watts does not exceed the maximum figure specified on the current station authorization. On authorizations stating only the input power to the final radiofrequency stage, the maximum permissible output power is 75 percent for frequencies below 25 MHz and 60 percent of the input power for frequencies above 25 MHz. If a non-DC final radiofrequency stage is utilized, then the output power shall not exceed 75 percent of the input power. This determination shall be made, and the results thereof entered into the station

records, in accordance with the following:

(1) When the transmitter is initially installed;

(2) When any change is made in the transmitter which may increase the transmitter power input.

(c) The licensee of each station shall employ a suitable procedure to determine that the modulation of each transmitter, which is authorized to operate with an output power in excess of two watts, does not exceed the limits specified in this part. This determination shall be made and the following results entered in the station records, in accordance with the following:

(1) When the transmitter is initially installed;

(2) When any change is made in the transmitter which may affect the modulation characteristics.

(d) The determinations required by paragraphs (a), (b), and (c) of this section may, at the opinion of the licensee, be made by a qualified engineering measurement service, in which case the required record entries shall show the name and address of the engineering measurement service as well as the name of the person making the measurements.

(e) In the case of mobile transmitters, the determinations required by paragraphs (a) and (c) of this section

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may be made at a test or service bench: *Provided*, That the measurements are made under load conditions equivalent to actual operating conditions; and provided further, that after installation in the mobile unit the transmitter is given a routine check to determine that it is capable of being received satisfactorily by an appropriate receiver.

§90.217 Exemption from technical standards.

Except as noted herein, transmitters used at stations licensed below 800 MHz on any frequency listed in subparts B and C of this part or licensed on a business category channel above 800 MHz which have an output power not exceeding 120 milliwatts are exempt from the technical requirements set out in this subpart, but must instead comply with the following:

(a) For equipment designed to operate with a 25 kHz channel bandwidth, the sum of the bandwidth occupied by the emitted signal plus the bandwidth required for frequency stability shall be adjusted so that any emission appearing on a frequency 40 kHz or more removed from the assigned frequency is attenuated at least 30 dB below the unmodulated carrier.

(b) For equipment designed to operate with a 12.5 kHz channel bandwidth, the sum of the bandwidth occupied by the emitted signal plus the bandwidth required for frequency stability shall be adjusted so that any emission appearing on a frequency 25 kHz or more removed from the assigned frequency is attenuated at least 30 dB below the unmodulated carrier.

(c) For equipment designed to operate with a 6.25 kHz channel bandwidth, the sum of the bandwidth occupied by the emitted signal plus the bandwidth required for frequency stability shall be adjusted so that any emission appearing on a frequency 12.5 kHz or more removed from the assigned frequency is attenuated at least 30 dB below the unmodulated carrier.

(d) Transmitters may be operated in the continuous carrier transmit mode.

[60 FR 37267, July 19, 1995, as amended at 62 FR 2041, Jan. 15, 1997; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, §90.217 was amended by revising the introductory text, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

§90.217 Exemption from technical standards.

Except as noted herein, transmitters used at stations licensed in the Business Radio Service and at stations licensed in the 150-174 MHz and 421-512 MHz bands in any Radio Service listed in subparts B, C, D, and E of this part which have an output power not exceeding 120 milliwatts are exempt from the technical requirements set out in this subpart, but must instead comply with the following:

* * * * *

§90.219 Use of signal boosters.

Licensees authorized to operate radio systems in the frequency bands above 150 MHz may employ signal boosters at fixed locations in accordance with the following criteria:

(a) The amplified signal is retransmitted only on the exact frequency(ies) of the originating base, fixed, mobile, or portable station(s). The booster will fill in only weak signal areas and cannot extend the system's normal signal coverage area.

(b) Class A narrowband signal boosters must be equipped with automatic gain control circuitry which will limit the total effective radiated power (ERP) of the unit to a maximum of 5 watts under all conditions. Class B broadband signal boosters are limited to 5 watts ERP for each authorized frequency that the booster is designed to amplify.

(c) Class A narrowband boosters must meet the out-of-band emission limits of §90.209 for each narrowband channel that the booster is designed to amplify. Class B broadband signal boosters must meet the emission limits of §90.209 for frequencies outside of the booster's design passband.

(d) Class B broadband signal boosters are permitted to be used only in confined or indoor areas such as buildings, tunnels, underground areas, etc., or in remote areas, i.e., areas where there is little or no risk of interference to other users.

(e) The licensee is given authority to operate signal boosters without separate authorization from the Commission. Type-accepted equipment must be employed and the licensee must ensure that all applicable rule requirements are met.

(f) Licensees employing either Class A narrowband or Class B broadband signal boosters as defined in §90.7 are responsible for correcting any harmful interference that the equipment may cause to other systems. Normal co-channel transmissions will not be considered as harmful interference. Licensees will be required to resolve interference problems pursuant to §90.173(b).

[61 FR 31052, June 19, 1996]

Subpart J—Non-Voice and Other Specialized Operations

§90.231 Scope.

This subpart sets forth requirements and standards for licensing and operation of non-voice and other specialized radio uses (other than radiolocation). Such uses include secondary signaling, telemetry, radioteleprinter, radiofacsimile, automatic vehicle monitoring (AVM), radio call box, relay, vehicular repeater, and control station operations.

§90.233 Base/mobile non-voice operations.

The use of A1D, A2D, F1D, F2D, G1D, or G2D emission may be authorized to base/mobile operations in accordance with the following limitations and requirements.

(a) Licensees employing non-voice communications are not relieved of their responsibility to cooperate in the shared use of land mobile radio channels. See also §§90.403 and 90.173(a) and (b).

(b) Authorization for non-voice emission may be granted only on frequencies subject to the coordination requirements set forth in §90.175. Non-voice operations on frequencies not subject to these requirements are permitted only a secondary basis to voice communications.

(c) Provisions of this section do not apply to authorizations for paging, te-

lemetry, radiolocation, AVM, radioteleprinter, radio call box operations, or authorizations granted pursuant to subpart T of this part.

[48 FR 2794, Feb. 3, 1983, as amended at 49 FR 48711, Dec. 14, 1984; 56 FR 19602, Apr. 29, 1991]

§90.235 Secondary fixed signaling operations.

Fixed operations may, subject to the following conditions, be authorized on a secondary basis for voice, tone or impulse signaling on a licensee's mobile service frequency(ies) above 25 MHz within the area normally covered by the licensee's mobile system. Voice signaling will be permitted only in the Public Safety Pool.

(a) The bandwidth shall not exceed that authorized to the licensee for the primary operations on the frequency concerned.

(b) The output power shall not exceed 30 watts at the remote site.

(c) A1D, A2D, F1D, F2D, G1D and G2D emissions may be authorized. In the Police Radio Service, A3E, F1E, F2E, F3E, G1E, G2E, or G3E emissions may also be authorized.

(d) Except for those systems covered under paragraph (e) of this section, the maximum duration of any non-voice signaling transmission shall not exceed 2 seconds and shall not be repeated more than 3 times. Signaling transmissions may be staggered at any interval or may be continuous. In the Public Safety Pool, the maximum duration of any voice signaling transmission shall not exceed 6 seconds and shall not be repeated more than 3 times.

(e) Until December 31, 1999, for systems in the Public Safety Pool authorized prior to June 20, 1975, and Power and Petroleum licensees as defined in §90.7 authorized prior to June 1, 1976, the maximum duration of any signaling transmission shall not exceed 6 seconds and shall not be repeated more than 5 times. For Power licensees authorized between June 1, 1976, and August 14, 1989, signaling duration shall not exceed 2 seconds and shall not be repeated more than 5 times. Such systems include existing facilities and additional facilities which may be authorized as a clear and direct expansion of existing facilities. After December

31, 1999, all signaling systems shall be required to comply with the two second message duration and three message repetition requirements.

(f) Systems employing automatic interrogation shall be limited to non-voice techniques and shall not be activated for this purpose more than 10 seconds out of any 60 second period. This 10 second timeframe includes both transmit and response times.

(g) Automatic means shall be provided to deactivate the transmitter in the event the r.f. carrier remains on for a period in excess of 3 minutes or if a transmission for the same signaling function is repeated consecutively more than five times.

(h) Fixed stations authorized pursuant to the provisions of this section are exempt from the requirements of §§ 90.137(b), 90.425, and 90.429.

(i) Base, mobile, or mobile relay stations may transmit secondary signaling transmissions to receivers at fixed locations subject to the conditions set forth in this section.

(j) Under the provisions of this section, a mobile service frequency may not be used exclusively for secondary signaling.

(k) The use of secondary signaling will not be considered in whole or in part as a justification for authorizing additional frequencies in a licensee's land mobile radio system.

(l) Secondary fixed signaling operations conducted in accordance with the provisions of §§ 90.317(a), or 90.637(c), or 90.731 are exempt from the foregoing provisions of this section.

[54 FR 28679, July 7, 1989, as amended at 57 FR 34693, Aug. 6, 1992; 58 FR 30996, May 28, 1993; 60 FR 50123, Sept. 28, 1995; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, § 90.235 was amended by revising the last sentence of the introductory text, the last sentence of paragraph (d), and paragraph (e), effective Oct. 17, 1997.

§ 90.237 Interim provisions for operation of radioteleprinter and radiofacsimile devices.

These provisions authorize and govern the use of radioteleprinter and radiofacsimile devices for base station use (other than on mobile-only or paging-only frequencies) in all radio pools

and services except Radiolocation in this part.

(a) Information must be submitted with an application to establish that the minimum separation between a proposed radioteleprinter or radiofacsimile base station and the nearest co-channel base station of another licensee operating a voice system is 120 km. (75 mi.) for a single frequency mode of operation, or 56 km. (35 mi.) two frequency mode of operation. Where this minimum mileage separation cannot be achieved, either agreement to the use of F1B, F2B, F3C, G1B, G2B or G3C emission must be received from all existing co-channel licensees using voice emission within the applicable mileage limits, or if agreement was not received, the licensee of the radioteleprinter or radiofacsimile system is responsible for eliminating any interference with preexisting voice operations. New licenses of voice operations will be expected to share equally any frequency occupied by established radioteleprinter or radiofacsimile operations.

(b) The application must list the manufacturer and model number of the radioteleprinter or radiofacsimile system to be employed, or contain a detailed technical description of the system.

(c) Transmitters type-accepted under this part for use of G3E or F3E emission may also be used for F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter or radiofacsimile, provided the keying signal is passed through the low pass audio frequency filter required for G3E or F3E emission. The transmitter must be so adjusted and operated that the instantaneous frequency deviation does not exceed the maximum value allowed for G3E or F3E.

(d) Frequencies will not be assigned exclusively for F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter or radiofacsimile (except where specifically provided for in the frequency limitations).

(e) The requirements in this part applicable to the use of G3E or F3E emission are also applicable to the use of F1B, F2B, F3C, G1B, G2B or G3C emission for radioteleprinter and radiofacsimile transmissions.

(f) The station identification required by §90.425 must be given by voice or Morse code.

(g) For single sideband operations in accordance with §90.266, transmitters type-accepted under this part for use of J3E emissions may also be used for A2B and F2B emission for radioteleprinter transmissions. Transmitters type-accepted under this part for use of J3E emissions in accordance with §§90.63(d)(1), 90.65(c)(1), 90.73(d)(1) and 90.81(d)(13) may also be used for A1B, A2B, F1B, F2B, J2B, and A3C emissions to provide standby backup circuits for operational telecommunications circuits which have been disrupted, where so authorized in other sections of this part.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 48712, Dec. 14, 1984; 51 FR 14998, Apr. 22, 1986; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, §90.237 was amended by revising the introductory text, effective Oct. 17, 1997.

§90.238 Telemetry operations.

The use of telemetry is authorized under this part on the following frequencies.

(a) 72–76 MHz (in accordance with §90.257 and subject to the rules governing the use of that band).

(b) 154.45625, 154.46375, 154.47125, and 154.47875 MHz (subject to the rules governing the use of those frequencies).

(c) 173.20375, 173.210, 173.2375, 173.2625, 173.2875, 173.3125, 173.3375, 173.3625, 173.390, and 173.39625 MHz (subject to the rules governing the use of those frequencies).

(d) 216–220 and 1427–1435 MHz (as available in the Public Safety and Industrial/Business Pools and in accordance with §90.259).

(e) In the 450–470 MHz band, telemetry operations will be authorized on a secondary basis with a transmitter output power not to exceed 2 watts on frequencies subject to §90.20(d)(27) or §90.35(c)(30).

(f) 220–222 MHz as available under subpart T of this part.

(g) 450–470 MHz band (as available for secondary fixed operations in accordance with §90.261).

(h) 458–468 MHz band (as available in the Public Safety Pool for bio-medical telemetry operations).

(i) Frequencies available for low power (2 watts or less) operations in the Industrial/Business Pool.

[44 FR 17183, Mar. 21, 1979, as amended at 46 FR 45955, Sept. 16, 1981; 50 FR 39680, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 56 FR 19603, Apr. 29, 1991; 60 FR 37268, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, §90.238 was amended by revising paragraphs (a) through (e), (h), and (i), effective Oct. 17, 1997.

§90.239 [Reserved]

§90.241 Radio call box operations.

(a) The frequencies in the 72–76 MHz band listed in §90.257(a)(1) may be assigned in the Public Safety Pool for operation or radio call boxes to be used by the public to request fire, police, ambulance, road service, and other emergency assistance, subject to the following conditions and limitations:

(1) Maximum transmitter power will be either 2.5 watts plate input to the final stage or 1 watt output.

(2) Antenna gain shall not exceed zero dBd (referred to a half-wave dipole) in any horizontal direction.

(3) Only vertical polarization of antennas shall be permitted.

(4) The antenna and its supporting structure must not exceed 6.1 m (20 feet) in height above the ground.

(5) Only A1D, A2D, F1D, F2D, G1D, or G2D emission shall be authorized.

(6) The transmitter frequency tolerance shall be 0.005 percent.

(7) Except for test purposes, each transmission must be limited to a maximum of two seconds and shall not be automatically repeated more than two times at spaced intervals within the following 30 seconds. Thereafter, the authorized cycle may not be reactivated for one minute.

(8) All transmitters installed after December 10, 1970, shall be furnished with an automatic means to deactivate the transmitter in the event the carrier remains on for a period in excess of three minutes. The automatic cutoff system must be designed so the transmitter can be only manually reactivated.

(9) Frequency selection must be made with regard to reception of television stations on channels 4 (66–72 MHz) and

5 (76–82 MHz) and should maintain the greatest possible frequency separation from either or both of these channels, if they are assigned in the area.

(b) [Reserved]

(c) Frequencies in the 450–470 MHz band which are designated as available for assignment to central control stations and radio call box installations in § 90.20(c) or § 90.20(d)(58) may be assigned in the Public Safety Pool for highway call box systems subject to the following requirements:

(1) Call box transmitters shall be installed only on limited access highways and may communicate only with central control stations of the licensee.

(2) Maximum transmitter power for call boxes will be either 2.5 watts input to the final amplifier stage or one watt output. The central control station shall not exceed 25 watts effective radiated power (ERP).

(3) The height of a call box antenna may not exceed 6.1 meters (20 feet) above the ground, the natural formation, or the existing man-made structure (other than an antenna supporting structure) on which it is mounted. A central station transmitting antenna, together with its supporting structure shall not exceed 15 m. (50 ft.) above the ground surface.

(4) Only F1D, F2D, F3E, G1D, G2D, or G3E, emission may be authorized for nonvoice signaling, radiotelephony, and multiplexed voice and nonvoice use. The provisions in this part applicable to the use of F3E or G3E emission are also applicable to the use of F1D, F2D, G1D or G2D emission for call box transmitters.

(5) The station identification required by § 90.425 shall be by voice and may be transmitted for the system from the central control station. Means shall be provided at each central control station location to automatically indicate the call box unit identifier when a call box unit is activated.

(6) Call box installations must be so designed that their unit identifier is automatically transmitted when the handset is lifted.

(7) Each application for a call box system must include a description of the nonvoice transmitting equipment. This description shall specify the character structure, bit rate, modulating

tone frequencies, identification codes, and the method of modulation (i.e., frequency shift, tone shift, or tone phase shift).

(8) Call box installations may be used secondarily for the transmission of information from roadside sensors. Central control station transmitters may be used secondarily to interrogate call box roadside sensors and for the transmission of signals to activate roadside signs.

(9) Each call box transmitter must be provided with a timer which will automatically deactivate the transmitter after 2 minutes unless the central control station operator reactivates the timer cycle.

(10) The central control station must include facilities that permit direct control of any call box in the system.

(11) Call box transmitter frequency tolerance shall be 0.001 percent.

(12) Transmitters type accepted under this part for use of F3E or G3E emission may be used for F1D, F2B, G2B or G2D emission provided that the audio tones or digital data bits are passed through the low pass audio filter required to be provided in the transmitter for F3E or G3E emission. The transmitter must be adjusted and operated so that the instantaneous frequency deviation does not exceed the maximum value allowed for F3E or G3E emission.

(d) In addition to the frequencies available pursuant to § 90.20(c) the frequencies set forth in § 90.20(d)(58) may be used for central control station and call box installations in areas where such frequencies are available for fixed system use subject to the requirements and limitations of that section and subject to the provisions of paragraphs (c) (1), (4), (5), (6), (7), (8), (9), (10), and (12) of this section.

(e) In accordance with subpart Q of this part, the frequencies available pursuant to § 90.20(c) or § 90.20(d)(58) for central control station and call box installations may be assigned for developmental operation as part of a highway safety communication program

which is designed to provide radio communications directly with motorists to and from their motor vehicles.

[43 FR 54791, Nov. 22, 1978; 44 FR 32219, June 5, 1979; 49 FR 48712, Dec. 14, 1984; 50 FR 39680, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 54 FR 38681, Sept. 20, 1989; 54 FR 45891, Oct. 31, 1989; 58 FR 44957, Aug. 25, 1993; 62 FR 18927, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18927, Apr. 17, 1997, § 90.241 was amended by revising the introductory text of paragraphs (a) and (c) and revising paragraphs (d) and (e), effective Oct. 17, 1997.

§ 90.242 Travelers' information stations.

(a) The frequencies 530 through 1700 kHz in 10 kHz increments may be assigned to the Public Safety Pool for the operation of Travelers' Information Stations subject to the following conditions and limitations.

(1) For Travelers' Information Station applications only, eligibility requirements as set forth in § 90.20(a) are extended to include park districts and authorities.

(2) Each application for a station or system shall be accompanied by:

(i) A statement certifying that the transmitting site of the Travelers Information Station will be located at least 15 km (9.3 miles) measured orthogonally outside the measured 0.5 mV/m daytime contour (0.1 mV/m for Class A stations) of any AM broadcast station operating on a first adjacent channel or at least 130 km (80.6 miles) outside the measured 0.5 mV/m daytime contour (0.1 mV/m for Class A stations) of any AM broadcast station operating on the same channel, or, if nighttime operation is proposed, outside the theoretical 0.5 mV/m-50% nighttime skywave contour of a U.S. Class A station. If the measured contour is not available, then the calculated 0.5 mV/m field strength contour shall be acceptable. These contours are available for inspection at the concerned AM broadcast station and FCC offices in Washington, DC.

(ii) In consideration of possible cross-modulation and inter-modulation interference effects which may result from the operation of a Travelers Information Station in the vicinity of an AM broadcast station on the second or

third adjacent channel, the applicant shall certify that he has considered these possible interference effects and, to the best of his knowledge, does not foresee interference occurring to broadcast stations operating on second or third adjacent channels.

(iii) A map showing the geographical location of each transmitter site and an estimate of the signal strength at the contour of the desired coverage area. For a cable system, the contour to be shown is the estimated field strength at 60 meters (197 feet) from any point on the cable. For a conventional radiating antenna, the estimated field strength contour at 1.5 km (0.93 mile) shall be shown. A contour map comprised of actual on-the-air measurements shall be submitted to the Commission within 60 days after station authorization or completion of station construction, whichever occurs later. A sufficient number of points shall be chosen at the specified distances (extrapolated measurements are acceptable) to adequately show compliance with the field strength limits.

(iv) For each transmitter site, the transmitter's output power, the type of antenna utilized, its length (for a cable system), its height above ground, distance from transmitter to the antenna, and the elevation above sea level at the transmitting site.

(3) Travelers Information Stations will be authorized on a secondary basis to stations authorized on a primary basis in the bands 510–535 and 1605–1715 kHz.

(4) A Travelers Information Station authorization may be suspended, modified, or withdrawn by the Commission without prior notice of right to hearing if necessary to resolve interference conflicts, to implement agreements with foreign governments, or in other circumstances warranting such action.

(5) The transmitting site of each Travelers' Information Station shall be restricted to the immediate vicinity of the following specified areas: Air, train, and bus transportation terminals, public parks and historical sites, bridges, tunnels, and any intersection of a Federal Interstate Highway with any other Interstate, Federal, State, or local highway.

(6) A Travelers Information Station shall normally be authorized to use a single transmitter. However, a system of stations, with each station in the system employing a separate transmitter, may be authorized for a specified area provided sufficient need is demonstrated by the applicant.

(7) Travelers Information Stations shall transmit only noncommercial voice information pertaining to traffic and road conditions, traffic hazard and travel advisories, directions, availability of lodging, rest stops and service stations, and descriptions of local points of interest. It is not permissible to identify the commercial name of any business establishment whose service may be available within or outside the coverage area of a Travelers Information Station. However, to facilitate announcements concerning departures/arrivals and parking areas at air, train, and bus terminals, the trade name identification of carriers is permitted.

(b) *Technical standards.* (1) The use of 6K00A3E emission will be authorized, however N0N emission may be used for purposes of receiver quieting, but only for a system of stations employing "leaky" cable antennas.

(2) A frequency tolerance of 100 Hz shall be maintained.

(3) For a station employing a cable antenna, the following restrictions apply:

(i) The length of the cable antenna shall not exceed 3.0 km (1.9 miles).

(ii) Transmitter RF output power shall not exceed 50 watts and shall be adjustable downward to enable the user to comply with the specified field strength limit.

(iii) The field strength of the emission on the operating frequency shall not exceed 2 mV/m when measured with a standard field strength meter at a distance of 60 meters (197 feet) from any part of the station.

(4) For a station employing a conventional radiating antenna(s) (ex. vertical monopole, directional array) the following restrictions apply:

(i) The antenna height above ground level shall not exceed 15.0 meters (49.2 feet).

(ii) Only vertical polarization of antennas shall be permitted.

(iii) Transmitter RF output power shall not exceed 10 watts to enable the user to comply with the specified field strength limit.

(iv) The field strength of the emission on the operating frequency shall not exceed 2 mV/m when measured with a standard field strength meter at a distance of 1.50 km (0.93 miles) from the transmitting antenna system.

(5) For co-channel stations operating under different licenses, the following minimum separation distances shall apply:

(i) 0.50 km (0.31 miles) for the case when both stations are using cable antennas.

(ii) 7.50 km (4.66 miles) for the case when one station is using a conventional antenna and the other is using a cable antenna.

(iii) 15.0 km (9.3 miles) for the case when both stations are using conventional antennas.

(6) For a system of co-channel transmitters operating under a single authorization utilizing either cable or conventional antennas, or both, no minimum separation distance is required.

(7) An applicant desiring to locate a station that does not comply with the separation requirements of this section shall coordinate with the affected station.

(8) Each transmitter in a Travelers Information Station shall be equipped with an audio low-pass filter. Such filter shall be installed between the modulation limiter and the modulated stage. At audio frequencies between 3 kHz and 20 kHz this filter shall have an attenuation greater than the attenuation at 1 kHz by at least:

$60 \log_{10} (f/3)$ decibels.

where "f" is the audio frequency in kHz. At audio frequencies above 20 kHz, the attenuation shall be at least 50 decibels greater than the attenuation at 1 kHz.

[43 FR 54791, Nov. 22, 1978; 44 FR 67118, Nov. 23, 1979; 49 FR 48712, Dec. 14, 1984, as amended at 54 FR 39740, Sept. 28, 1989; 56 FR 64874, Dec. 12, 1991; 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, §90.242 was amended by revising the introductory text of paragraph (a) and revising paragraph (a)(1), effective Oct. 17, 1997.

§ 90.243 Mobile relay stations.

(a) Mobile relay operations will be authorized on frequencies below 512 MHz, except in the Radiolocation Service.

(b) Special provisions for mobile relay operations:

(1) In the Public Safety Pool, medical services systems in the 150–160 MHz band are permitted to be cross-banded for mobile and central stations operations with mobile relay stations authorized to operate in the 450–470 MHz band.

(2) [Reserved]

(3) In the Industrial/Business Pool, on frequencies designated with an “LR” in the coordinator column of the frequency table in § 90.35(b)(3), mobile relay operation shall be on a secondary basis to other co-channel operations.

(4) Except where specifically precluded, a mobile relay station may be authorized to operate on any frequency available for assignment to base stations.

(5) A mobile station associated with mobile relay station(s) may not be authorized to operate on a frequency below 25 MHz.

(c) Technical requirements for mobile relay stations.

(1) Each new mobile relay station with an output power of more than one watt, and authorized after January 1, 1972, that is activated by signals below 50 MHz shall deactivate the station upon cessation of reception of the activating continuous coded tone signal. Licensees may utilize a combination of digital selection and continuous coded tone control where required to insure selection of only the desired mobile relay station.

(2) Mobile relay stations controlled by signals above 50 MHz or authorized prior to January 1, 1972, to operate below 50 MHz are not required to incorporate coded signal or tone control devices unless the transmitters are consistently activated by undesired signals and cause harmful interference to other licensees. If activation by undesired signals causes harmful interference, the Commission will require the installation of tone control equipment within 90 days of a notice to the licensee.

(3) Except in the Industrial/Business Pool, on frequencies designated with an “LR” in the coordinator column of the frequency table in § 90.35(b)(3), each new mobile-relay station authorized after January 1, 1972, shall be equipped for automatic deactivation of the transmitter within 5 seconds after the signals controlling the station cease.

(4) Except in the Industrial/Business Pool, on frequencies designated with an “LR” in the coordinator column of the frequency table in § 90.35(b)(3), each new mobile-relay station authorized after January 1, 1972, during periods that is not controlled from a manned fixed control point; shall have an automatic time delay or clock device that will deactivate the station not more than 3 minutes after its activation by a mobile unit.

(5) In the Industrial/Business Pool, on frequencies designated with an “LR” in the coordinator column of the frequency table in § 90.35(b)(3), each mobile relay station, regardless of the frequency or frequencies of the signal by which it is activated shall be so designated and installed that it will be deactivated automatically when its associated receiver or receivers are not receiving a signal on the frequency or frequencies which normally activate it.

(6) Multiple mobile relay station radio systems shall use wireline or radio stations on fixed frequencies for any necessary interconnect circuits between the mobile relay stations.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 40177, Oct. 15, 1984; 50 FR 13606, Apr. 5, 1985; 50 FR 39680, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 54 FR 39740, Sept. 28, 1989; 56 FR 19603, Apr. 29, 1991; 56 FR 32517, July 17, 1991; 60 FR 37268, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, § 90.243 was amended by revising paragraphs (a), (b)(1), (b)(3), (c)(3), (c)(4), and (c)(5) and removing and reserving paragraph (b)(2), effective Oct. 17, 1997.

§ 90.245 Fixed relay stations.

Except where specifically provided for, fixed relay stations shall be authorized to operate only on frequencies available for use by operational fixed stations.

§ 90.247 Mobile repeater stations.

A mobile station authorized to operate on a mobile service frequency above 25 MHz may be used as a mobile repeater to extend the communications range of hand-carried units subject to the following:

(a) Mobile repeaters and/or associated hand-carried transmitters may be assigned separate base/mobile frequencies for this use in addition to the number of frequencies normally assignable to the licensee.

(b) In the Industrial/Business Pool, on frequencies below 450 MHz, only low power frequencies (2 watts or less output power) may be assigned for use by mobile repeaters or by hand-carried transmitters whose communications are directed to mobile repeaters, when separate frequencies are assigned for that purpose.

(c) Except as provided in paragraph (d) of this section, hand-carried transmitters whose communications will be automatically relayed by mobile stations shall be limited to a maximum output power of 2.5 watts.

(d) In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), use of mobile repeaters is on a secondary basis to the stations of any other licensee. Hand carried units used in connection with mobile repeaters on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3) may operate only above 150 MHz and are limited to a maximum output power of six watts. The frequency and maximum power shall be specified in the station authorization.

(e) In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), the output power of a mobile repeater station, when transmitting as a repeater station on the frequency used for communication with its associated pack-carried or hand-carried units, shall not exceed 6 watts except when the same frequency is also used by the same station for direct communication with vehicular mobile units or with one or more base stations.

(f) When automatically retransmitting messages originated by or destined for hand-carried units, each mobile station shall activate the mobile transmitter only with a continuous coded tone, the absence of which will deactivate the mobile transmitter. The continuous coded tone is not required when the mobile unit is equipped with a switch that activates the automatic mode of the mobile unit and an automatic time-delay device that deactivates the transmitter after any uninterrupted transmission period in excess of 3 minutes.

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, § 90.247 was amended by revising paragraphs (a), (b), (d), and (e), effective Oct. 17, 1997.

§ 90.249 Control stations.

Control stations associated with land mobile stations under this part shall be authorized to operate subject to the following:

(a) *Frequencies for control stations.* (1) Control stations may be authorized to operate on frequencies available for use by operational fixed stations.

(2) A control station associated with mobile relay station(s) may, at the option of the applicant, be assigned the frequency of the associated mobile station. In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), such a control station may be assigned any mobile service station frequency available for assignment to mobile stations. Such operation is on a secondary basis to use of the frequency for regular mobile service communications.

(3) Control and fixed stations in the Public Safety Pool may be authorized on a temporary basis to operate on frequencies available for base and mobile stations between 152 and 450 MHz, where there is an adequate showing that such operations cannot be conducted on frequencies allocated for assignment to operational fixed stations. Such operation will not be authorized initially or renewed for periods in excess of one year. Any such authorization shall be subject to immediate termination if harmful interference is

caused to stations in the mobile service, or if the particular frequency is required for mobile service operations in the area concerned.

(b) [Reserved]

(c) A base station which is used intermittently as a control station for one or more associated mobile relay stations of the same licensee shall operate only on the mobile service frequency assigned to the associated mobile relay station when operating as a base station and on the mobile service frequency assigned to the associated mobile station when operating as a control station. Authority for such dual classification and use must be shown on the station authorization. When operating as a control station, the licensee must meet all control station requirements. In the Industrial/Business Pool, on frequencies designated with an "LR" in the coordinator column of the frequency table in § 90.35(b)(3), base stations used intermittently as control stations shall operate only on a mobile service frequency which is available for assignment to base stations.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 36376, Sept. 17, 1984; 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, § 90.249 was amended by revising the second sentence of paragraph (a)(2), the first sentence of paragraph (a)(3), and the last sentence of paragraph (c), effective Oct. 17, 1997.

§ 90.250 Meteor burst communications.

Meteor burst communications may be authorized for the use of private radio stations subject to the following provisions:

(a) Station operation is limited to the State of Alaska only.

(b) The frequency 44.20 MHz may be used for base station operation and 45.90 MHz for remote station operation on a primary basis. The frequencies 42.40 and 44.10 MHz may be used by base and remote stations, respectively, on a secondary basis to common carrier stations utilizing meteor burst communications. Users shall cooperate among themselves to the extent practicable to promote compatible operation.

(c) The maximum transmitter output power shall not exceed 2000 watts for

base stations and 500 watts for remote stations.

(d) Co-channel base stations of different licensees shall be located at least 241 km (150 miles) apart. A remote station and a base station of different licensees shall be located at least 241 km (150 miles) apart if the remote units of the different licensees operate on the same frequency. Waiver of this requirement may be granted if affected users agree to a cooperative sharing arrangement.

(e) The authorized emission designator to be used in F1E, F7W, G1E or G7W to allow for Phase Shift Keying (PSK) or Frequency Shift Keying (FSK).

(f) The maximum authorized bandwidth is 20 kHz (20 F1E, F7W, G1E or G7W).

(g) Station identification in accordance with § 90.425(a) or (b) shall only be required for the base station.

(h) Stations may be required to comply with additional conditions of operation as necessary on a case-by-case basis as specified in the authorization.

(i) Stations employing meteor burst communications shall not cause interference to other stations operating in accordance with the allocation table. New authorizations will be issued subject to the Commission's developmental grant procedure as outlined in subpart Q of this part. Prior to expiration of the developmental authorization, application Form 574 should be filed for issuance of a permanent authorization.

[48 FR 34043, July 27, 1983, as amended at 49 FR 48712, Dec. 14, 1984; 58 FR 44957, Aug. 25, 1993]

Subpart K—Standards for Special Frequencies or Frequency Bands

§ 90.251 Scope.

This subpart sets forth special requirements applicable to the use of certain frequencies or frequency bands.

[54 FR 39740, Sept. 28, 1989]

§ 90.253 Use of frequency 5167.5 kHz.

The frequency 5167.5 kHz may be used by any station authorized under this part to communicate with any other station in the State of Alaska for emergency communications. The maximum power permitted is 150 watts peak

envelope power (PEP). All stations operating on this frequency must be located in or within 50 nautical miles (92.6 km) of the State of Alaska. This frequency may also be used by stations authorized in the Alaska-private fixed service for calling and listening, but only for establishing communication before switching to another frequency.

[49 FR 32201, Aug. 13, 1984]

§ 90.255 [Reserved]

§ 90.257 Assignment and use of frequencies in the band 72-76 MHz.

(a) The following criteria shall govern the authorization and use of frequencies within the band 72-76 MHz by fixed stations. (For call box operations see § 90.241).

(1) The following frequencies in the band 72-76 MHz may be used for fixed operations:

MHz:

72.02	72.80
72.04	72.82
72.06	72.84
72.08	72.86
72.10	72.88
72.12	72.90
72.14	72.92
72.16	72.94
72.18	72.96
72.20	72.98
72.22	75.42
72.24	75.46
72.26	75.50
72.28	75.54
72.30	75.58
72.32	75.62
72.34	75.64
72.36	75.66
72.38	75.68
72.40	75.70
72.42	75.72
72.46	75.74
72.50	75.76
72.54	75.78
72.58	75.80
72.62	75.82
72.64	75.84
72.66	75.86
72.68	75.88
72.70	75.90
72.72	75.92
72.74	75.94
72.76	75.96
72.78	75.98.

(2) All authorizations are subject to the condition that no harmful inter-

ference will be caused to television reception on Channels 4 and 5.

(3) The applicant must agree to eliminate any harmful interference caused by his operation to TV reception on either Channel 4 or 5 that might develop by whatever means are necessary. Such action must be taken within 90 days of notification by the Commission. If such interference is not eliminated within the 90-day period, operation of the fixed station will be discontinued.

(4) Vertical polarization must be used.

(5) Whenever it is proposed to locate a 72-76 MHz fixed station less than 128 km (80 mi.) but more than 16 km (10 mi.) from the site of a TV transmitter operating on either channel 4 or 5, or from the post office of a community in which such channels are assigned but not in operation, the fixed station shall be authorized only if there are fewer than 100 family dwelling units (as defined by the U.S. Bureau of the Census), excluding units 112 or more km (70 mi.) distant from the TV antenna site, located within a circle centered at the location of the proposed fixed station. The radius shall be determined by use of the following chart entitled, "Chart for Determining Radius From Fixed Station in 72-76 MHz Band to Interference Contour Along Which 10 Percent of Service From Adjacent Channel Television Station Would Be Destroyed." Two charts are available, one for Channel 4, and one for Channel 5. The Commission may, however, in a particular case, authorize the location of a fixed station within a circle containing 100 or more family dwelling units upon a showing that:

(i) The proposed site is the only suitable location.

(ii) It is not feasible, technically or otherwise, to use other available frequencies.

(iii) The applicant has a plan to control any interference that might develop to TV reception from his operations.

(iv) The applicant is financially able and agrees to make such adjustments in the TV receivers affected as may be necessary to eliminate any interference caused by his operations.

(v) All applications seeking authority to operate with a separation of less than 16 km (10 mi.) will be returned without action.

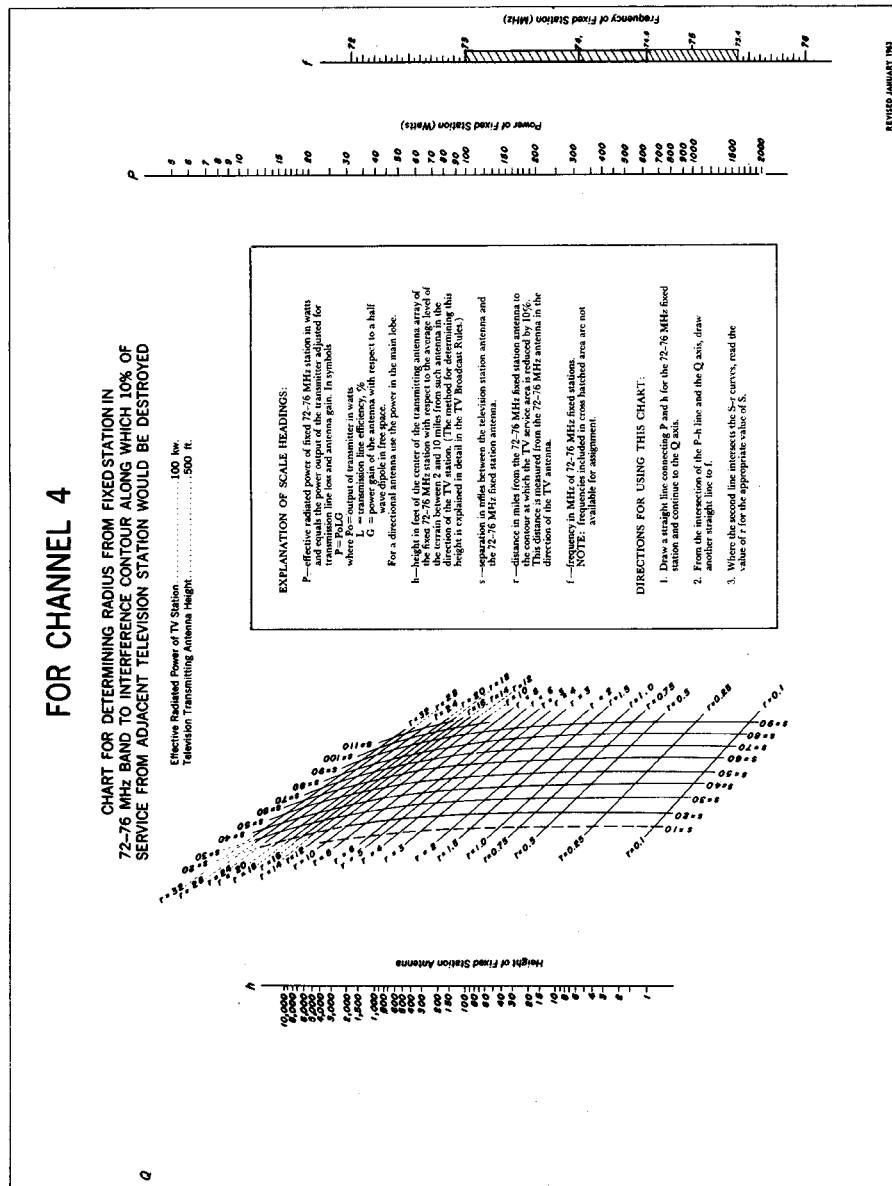
(b) The following criteria governs the authorization and use of frequencies in the 72–76 MHz band by mobile stations in the Industrial/Business Pool.

(1) Mobile operation on frequencies in the 72–76 MHz band is subject to the condition that no interference is caused to the reception of television stations operating on Channel 4 or 5. Interference will be considered to occur whenever reception of a regularly used television signal is impaired by signals radiated by stations operating under these rules in the 72 to 76 MHz band regardless of the quality of such reception or the strength of the signal used. In order to minimize the hazard of such interference, it shall be the duty of the licensee to determine whether interference is being caused to television reception, wherever television receivers other than those under the control of the licensee, are located within 31 m. (100 ft.) of any point where the stations licensed under these rules may be operated. In any case, it shall be the responsibility of the licensee to correct, at its own expense, any such interference and if the interference cannot be eliminated by the application of suitable techniques, the operation of the offending transmitter shall be sus-

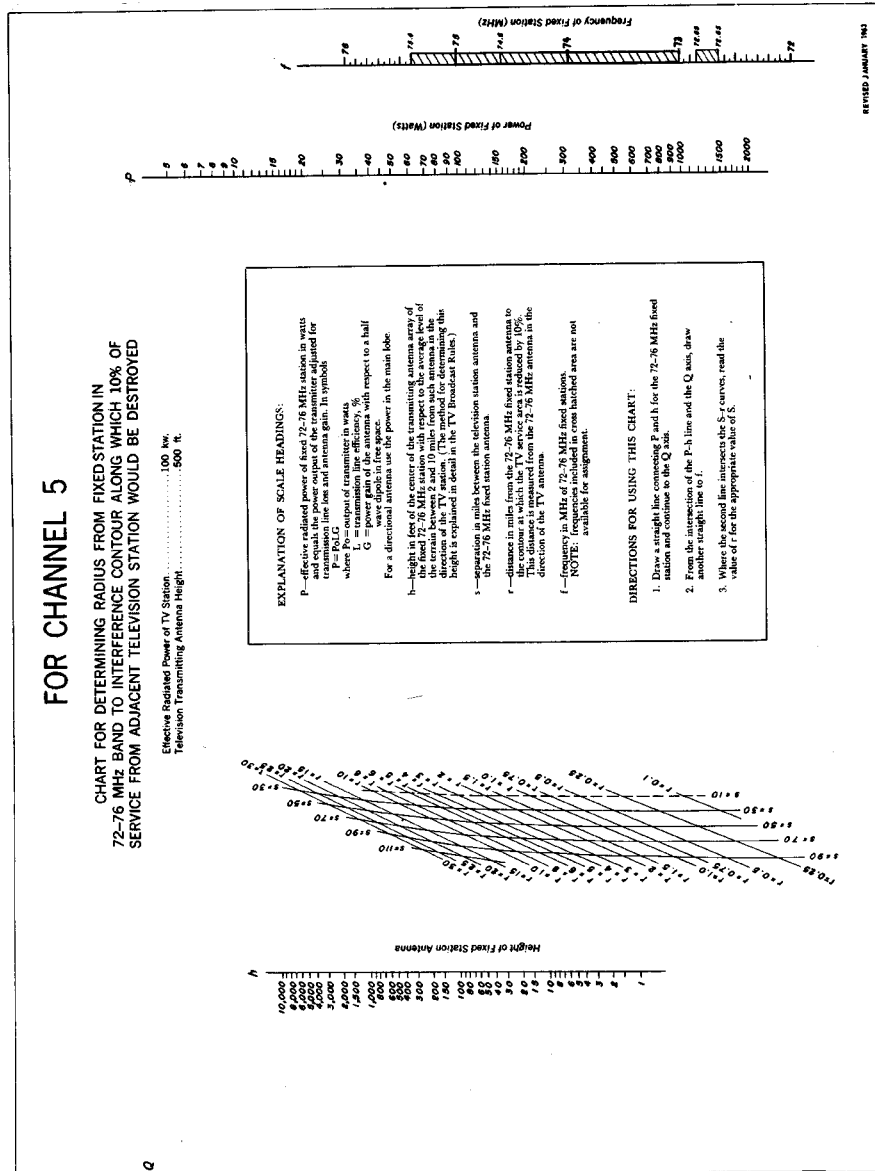
pending. If the complainant refuses to permit the licensee to apply remedial techniques which demonstrably will eliminate the interference without impairment of the original reception, the licensee is absolved of further responsibility.

(2) The maximum transmitter output power that will be authorized is 1 watt; and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may be used to provide the operational functions of a base or fixed station. The antennas of transmitters operating on these frequencies must be directly mounted or installed upon the transmitting unit: Except that when permanently installed aboard a vehicle, antenna and transmitter may be separated as required for convenience in mounting. Horizontal polarization will not be allowed; and the gain of antennas employed shall not exceed that of a halfwave dipole. The maximum bandwidth that will be authorized is 20 kHz. Tone control transmissions are permitted.

(c) Radio remote control of models is permitted on frequencies 10 kHz removed from these frequencies authorized for fixed and mobile operations in the 72–76 MHz band. Remote control operations are secondary to operation of fixed and mobile stations as provided for in this section.



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[43 FR 54791, Nov. 22, 1978; 44 FR 32219, June 5, 1979, as amended at 47 FR 51879, Nov. 18, 1982; 49 FR 41249, Oct. 22, 1984; 54 FR 38681, Sept. 20, 1989; 58 FR 30129, May 26, 1993; 60 FR 37268, July 19, 1995; 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, § 90.257 was amended by revising the introductory text of paragraph (b), effective Oct. 17, 1997.

§ 90.259 Assignment and use of frequencies in the bands 216–220 MHz and 1427–1435 MHz.

Frequencies in the bands 216–220 MHz and 1427–1435 MHz may be assigned to applicants under this part provided the band is listed in the individual radio pool under which they establish eligibility. Use of these bands is limited to telemetering purposes only and all operation is secondary to Federal Government operations. Operation in the band 216–220 MHz is also secondary to the maritime mobile service and operation in the band 1427–1429 MHz is also secondary to the space operation service (earth-to-space). Base stations authorized in these bands shall be used to perform telecommand functions with associated mobile telemetering stations. Base stations may also command actions by the vehicle itself, but will not be authorized solely to perform this function. Airborne use will not be authorized. Each application will be coordinated with the Federal Government by the Federal Communications Commission and is subject to such technical and operational limitations as may be imposed by the government. Each application should include precise information concerning emission characteristics, transmitter frequency deviation, output power, type and directional characteristics, if any, of the antenna, and the minimum necessary hours of operation.

[43 FR 54791, Nov. 22, 1978, as amended at 54 FR 38681, Sept. 20, 1989; 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, § 90.259 was amended by revising the first sentence, effective Oct. 17, 1997.

§ 90.261 Assignment and use of the frequencies in the band 450–470 MHz for fixed operations.

(a) Frequencies in the 450–470 MHz band as listed in § 90.20(c)(3) and § 90.35(b)(3) may be assigned to all eligibles for fixed use on a secondary basis to land mobile operations.

(b) Fixed stations located 140 km (87 mi) or more from the center of any urbanized area of 600,000 or more popu-

lation are limited to a transmitter output power of 75 watts. Fixed stations less than 140 km (87 mi) from the centers of these areas are limited to a transmitter output power of 20 watts. Urbanized areas of 600,000 or more population are defined in the U.S. Census of Population 1970, Vol. 1, Table 20, pages 1–74. The centers of the urbanized areas are determined from the Appendix, page 226, of the U.S. Department of Commerce publication “Airline Distance Between Cities in the United States.”

(c) All fixed systems are limited to one frequency pair with 5 MHz spacing and must employ directional antennas with a front-to-back ratio of 15 dB, except that omnidirectional antennas having unity gain may be employed by stations communicating with a minimum of three receiving locations encompassed in a sector of at least 160° in azimuth. Stations authorized for secondary fixed operations prior to (effective date of the rules) may continue to operate under the conditions of their initial authorization.

(d)–(e) [Reserved]

(f) Secondary fixed operations pursuant to paragraph (a) of this section will not be authorized on the following frequencies:

Frequencies (MHz)

451.800/456.800	452.9625/457.9625
451.80625/456.80625	452.96875/457.96875
451.8125/456.8125	453.025/458.025
451.81875/456.81875	453.03125/458.03125
452.525	453.0375/458.0375
452.53125	453.04375/458.04375
452.5375	453.075/458.075
452.54375	453.08125/458.08125
452.550	453.0875/458.0875
452.55625	453.09375/458.09375
452.5625	453.125/458.125
452.56875	453.13125/458.13125
452.575	453.1375/458.1375
452.58125	453.14375/458.14375
452.5875	453.175/458.175
452.59375	453.18125/458.18125
452.600	453.1875/458.1875
452.60625	453.19375/458.19375
452.6125	454.000/459.000
452.61875	454.00625/459.00625
452.925/457.925	454.0125/459.0125
452.93125/457.93125	454.01875/459.01875
452.9375/457.9375	462.950/467.950
452.94375/457.94375	462.95625/467.95625
452.950/457.950	462.9625/467.9625
452.95625/457.95625	462.96875/467.96875

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462.975/467.975	463.0875/468.0875
462.98125/467.98125	463.09375/468.09375
462.9875/467.9875	463.100/468.100
462.99375/467.99375	463.10625/468.10625
463.000/468.000	463.1125/468.1125
463.00625/468.00625	463.11875/468.11875
463.0125/468.0125	463.125/468.125
463.01875/468.01875	463.13125/468.13125
463.025/468.025	463.1375/468.1375
463.03125/468.03125	463.14375/468.14375
463.0375/468.0375	463.150/468.150
463.04375/468.04375	463.15625/468.15625
463.050/468.050	463.1625/468.1625
463.05625/468.05625	463.16875/468.16875
463.0625/468.0625	463.175/468.175
463.06875/468.06875	463.18125/468.18125
463.075/468.075	463.1875/468.1875
463.08125/468.08125	463.19375/468.19375

[57 FR 24992, June 12, 1992, as amended at 58 FR 33212, June 16, 1993; 60 FR 37268, July 19, 1995; 62 FR 18928, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18928, Apr. 17, 1997, §90.261 was amended by revising paragraph (a) and removing and reserving paragraphs (d) and (e), effective Oct. 17, 1997.

§90.263 Substitution of frequencies below 25 MHz.

Frequencies below 25 MHz when shown in the radio pool frequency listings under this part will be assigned to base or mobile stations only upon a satisfactory showing that, from a safety of life standpoint, frequencies above 25 MHz will not meet the operational requirements of the applicant. These frequencies are available for assignment in many areas; however, in individual cases such assignment may be impracticable due to conflicting frequency use authorized to stations in other services by this and other countries. In such cases, a substitute frequency, if found to be available, may be assigned from the following bands 1605–1750, 2107–2170, 2194–2495, 2506–2850, 3155–3400, or 4438–4650 kHz. Since such assignments are in certain instances subject to additional technical and operation limitation, it is necessary that each application also include precise information concerning transmitter output power, type and directional characteristics, if any, of the antenna, and the minimum necessary hours of operation. (This section is not applicable to the Radiolocation Radio Service, subpart F.)

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18929, Apr. 17, 1997]

47 CFR Ch. I (10–1–97 Edition)

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, §90.263 was amended by revising the first sentence, effective Oct. 17, 1997.

§90.264 Disaster communications between 2 and 10 MHz.

(a) The use of any particular frequency between 2 and 10 MHz is limited to those frequencies falling within the bands allocated to the fixed and land mobile services as indicated in §2.106 of the Commission's Rules and Regulations.

(b) Only in the following circumstances will authority be extended to stations to operate on the frequencies between 2 and 10 MHz:

(1) To provide communications circuits in emergency and/or disaster situations, where safety of life and property are concerned;

(2) To provide standby and/or backup communications circuits to regular domestic communications circuits which have been disrupted by disasters and/or emergencies.

(c) The FCC will not accept responsibility for protection of the circuits from harmful interference caused by foreign operations.

(d) In the event that a complaint of harmful interference resulting from operation of these circuits is received from a foreign source, the offending circuit(s) must cease operation on the particular frequency concerned immediately upon notification by the Commission.

(e) In order to accommodate the situations described in paragraphs (c) and (d) of this section, the equipment shall be capable of transmitting and receiving on any frequency within the bands between 2 and 10 MHz and capable of immediate change among the frequencies.

(f) Only 2K80J3E, 100HA1A and those emission types listed in §90.237(g) are permitted.

(g) Applicants must fulfill eligibility requirements set out in §90.20(d)(6) and shall submit disaster communications plans pursuant to §90.129(m).

(h) Training exercises which require use of these frequencies for more than 420 minutes per week, cumulative, are

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not authorized without prior written approval from the Commission.

[46 FR 52373, Oct. 27, 1981, as amended at 48 FR 32831, July 19, 1983; 49 FR 48712, Dec. 14, 1984; 62 FR 18929, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, §90.264 was amended by revising paragraph (g), effective Oct. 17, 1997.

§ 90.265 Assignment and use of frequencies in the bands 169–172 MHz and 406–413 MHz.

(a) The following frequencies are available for assignment to fixed stations in the Industrial/Business Pool subject to the provisions of this section:

FREQUENCIES (MHz)	
169.425	171.125
169.450	171.825
169.475	171.850
169.500	171.875
169.525	171.900
170.225	171.925
170.250	406.125
170.275	406.175
170.300	409.675
170.325	409.725
171.025	412.625
171.050	412.675
171.075	412.725
171.100	412.775

(1) The use of these frequencies is limited to transmitting hydrological or meteorological data.

(2) All use of these frequencies is on a secondary basis to Federal Government stations and the hydrological or meteorological data being handled must be made available on request to governmental agencies.

(3) Other provisions of this part notwithstanding, an operational fixed station operating on these frequencies shall not communicate with any station in the mobile service unless written authorization to do so has been obtained from the Commission.

(4) Persons who desire to operate stations on these frequencies should communicate with the Commission for instructions concerning the procedure to be followed in filing formal application.

(b) The following frequencies are available for wireless microphone operations to eligibles in this part, subject to the provisions of this paragraph:

FREQUENCIES (MHz)

169.445	170.245
171.045	171.845
169.505	170.305
171.105	171.905

(1) The emission bandwidth shall not exceed 54 kHz.

(2) The output power shall not exceed 50 milliwatts.

(3) The frequency stability of wireless microphones shall limit the total emission to within ± 32.5 kHz of the assigned frequency.

(4) Wireless microphone operations are unprotected from interference from other licensed operations in the band. If any interference from wireless microphone operation is received by any Government or non-Government operation, the wireless microphone must cease operation on the frequency involved. Applications are subject to Government coordination.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, §§0.131 and 0.331 of the Commission's Rules and 5 U.S.C. 553 (b)(3)(B) and (d)(3))

[49 FR 20506, May 15, 1984, as amended at 62 FR 18929, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, §90.265 was amended by revising the introductory text of paragraph (a), effective Oct. 17, 1997.

§ 90.266 Long distance communications on frequencies below 25 MHz.

(a) The use of any particular frequency between 2 and 25 MHz is limited to those frequencies falling within the bands allocated to the fixed and land mobile services as indicated in §2.106 of the Commission's Rules and Regulations.

(b) Only in the following circumstances will authority be extended to stations to operate on the frequencies below 25 MHz:

(1) To provide communications circuits to support operations which are highly important to the national interest and where other means of telecommunication are unavailable;

(2) To provide standby and/or backup communications circuits to regular domestic communications circuits which have been disrupted by disasters and/or emergencies.

(c) No protection is afforded to users of these frequencies from harmful interference caused by foreign operations.

(d) In the event that a complaint of harmful interference resulting from operation of these circuits is received from a foreign source, the offending circuit(s) must cease operation on the particular frequency concerned immediately upon notification by the Commission.

(e) In order to accommodate the situations described in paragraphs (c) and (d) of this section, the equipment shall be capable of transmitting and receiving on any frequency within the bands between 2 and 25 MHz and capable of immediate change among the frequencies, provided, however, that this requirement does not apply to equipment manufactured prior to August 15, 1983.

(f) Only 2K80J3E, 100HA1A, 100HA1B and those emission types listed in § 90.237(g) are permitted.

(g) Applicants must fulfill eligibility requirements set out in § 90.35(c)(1) and submit communications plans pursuant to § 90.129(o).

(h) Exercises or circuits tests which require use of these frequencies for more than seven hours per week cumulative are prohibited unless prior written approval is obtained from the Commission.

[48 FR 32996, July 20, 1983, as amended at 49 FR 48712, Dec. 14, 1984; 52 FR 29856, Aug. 12, 1987; 62 FR 18929, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, § 90.265 was amended by revising the section heading, the introductory text of paragraph (b), and paragraph (g), effective Oct. 17, 1997.

§ 90.267 Assignment and use of frequencies in the 450–470 MHz band for low-power use.

(a) Any regularly assignable frequency in the 450–470 MHz band listed in the tables in subparts B and C of this part may be designated by the frequency coordinators as a low-power channel in a defined geographic area. These channels are subject to the following conditions.

(1) [Reserved]

(2) Assignments are subject to the frequency coordination requirements of § 90.175.

(3) Stations are limited to 2 watts output power and will be licensed as mobile, but may serve the functions of base, fixed, or mobile relay stations.

(4) Wide area operations will not be authorized. The area of normal day-to-day operations will be described in the application in terms of maximum distance from a geographical center (latitude and longitude).

(5) A hospital or health care institution holding a license to operate a radio station under this part may operate a medical radio telemetry device with an output power not to exceed 20 milliwatts without specific authorization from the Commission. All licensees operating under this authority must comply with the requirements and limitations set forth in this section.

(6) Each coordinator must maintain a list of all channels designated for low-power use and the geographic areas where such channels are available. The coordinator must make this list available to the public upon request.

(7) Antennas of mobile stations used as fixed stations communicating with one or more associated stations located within 45 degrees of azimuth shall be directional and have a front to back ratio of at least 15 dB. Except as provided in this paragraph (b)(7), the height of the antenna used at any mobile station serving as a base, fixed or mobile relay station may not exceed 7 m. (20 ft) above the ground level.

(i) No limit shall be placed on the length or height above ground level of any commercially manufactured radiating transmission line when the transmission line is terminated in a non-radiating load and is routed at least 7 m. (20 ft) interior to the edge of any structure or is routed below ground level.

(ii) Only sea-based stations, and central alarm stations operating on frequencies allocated for central station protection operations, may utilize antennas mounted not more than 7 m. (20 ft.) above a man-made supporting structure, including antenna structures.

(b) [Reserved]

[60 FR 37268, July 19, 1995, as amended at 61 FR 4235, Feb. 5, 1996; 62 FR 2041, Jan. 15, 1997; 62 FR 18929, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, § 90.267 was amended by revising the introductory text of paragraph (a) and paragraphs (a)(2) and (a)(6) and removing and reserving paragraph (a)(1), effective Oct. 17, 1997.

§ 90.269 Use of frequencies for self-powered vehicle detectors.

(a) Frequencies subject to § 90.20(d)(22) may be used for the operation of self-powered vehicle detectors by licensees of base/mobile stations in the Public Safety Pool in accordance with the following conditions:

(1) All stations are limited to 100 milliwatts carrier power and 20K00F7W, 20K00F7X, 20K00F8W, 20K00F8X, 20K00F9W or 20K00F9X emissions. The frequency deviation shall not exceed 5 kHz. No more than two 30 ms. pulses may be emitted for each vehicle sensed.

(2) The transmitters must be crystal controlled with a frequency tolerance of plus or minus .005% from -20° to plus 50 °C. They must be type accepted.

(3) The total length of the transmission line plus antenna may not exceed one-half wavelength and must be integral with the unit.

(4) All operation shall be on a secondary, non-interference basis.

(b) [Reserved]

[48 FR 54982, Dec. 8, 1983, as amended at 54 FR 38681, Sept. 20, 1989; 62 FR 18929, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, § 90.269 was amended by revising the introductory text of paragraph (a), effective Oct. 17, 1997.

§ 90.273 Availability and use of frequencies in the 421-430 MHz band.

The frequency bands 422.1875-425.4875 MHz and 427.1875-429.9875 MHz are available for use in the Detroit, Michigan and Cleveland, Ohio areas. The bands 423.8125-425.4875 MHz and 428.8125-429.9875 MHz are available for use in the Buffalo, New York area. Sections 90.273 through 90.281 address the specific rules applicable to these bands. Use of these bands is also subject to the general technical standards and ap-

plication procedures contained in other subparts of part 90. The technical standards applicable in this band are the same as those contained in subpart I of part 90 for the 450-470 MHz band. Private land mobile use of these frequencies is subject to accepting any interference from Federal Government radiolocation operations.

(a) The following tables list frequencies available for assignment in the Public Safety and Industrial/Business Pools as indicated. In the tables, the Public Safety Pool frequencies are denoted as "PS" and the Industrial/Business Pool frequencies are denoted as "IB." The frequencies 422.19375 MHz through 424.99375 MHz are paired with frequencies 427.19375 MHz through 429.99375 MHz, respectively. Only the lower half of each frequency pair, available for base station operation, is listed in the tables. Corresponding mobile and control station frequencies are 5 MHz higher than the base station frequency. The frequencies 425.000 through 425.48125 are unpaired and are available for either single frequency dispatch or paging operations.

TABLE 1—CHANNELS AVAILABLE IN DETROIT AND CLEVELAND AREAS ONLY

Frequency (MHz)	Pool in which assigned
Paired channels:	
422.19375*	IB
422.200	IB
422.20625*	IB
422.21250	IB
422.21875*	IB
422.225	IB
422.23125*	IB
422.23750	IB
422.24375*	IB
422.250	IB
422.25625*	IB
422.26250	IB
422.26875*	IB
422.275	IB
422.28125*	IB
422.28750	IB
422.29375*	IB
422.300	IB
422.30625*	IB
422.31250	IB
422.31875*	IB
422.325	IB
422.33125*	IB
422.33750	IB
422.34375*	IB
422.350	IB
422.35625*	IB
422.36250	IB
422.36875*	IB
422.375	IB
422.38125*	IB

TABLE 1—CHANNELS AVAILABLE IN DETROIT AND CLEVELAND AREAS ONLY—Continued

Frequency (MHz)	Pool in which assigned
422.38750	IB
422.39375 *	IB
422.400	IB
422.40625 *	IB
422.41250	IB
422.41875 *	IB
422.425	IB
422.43125 *	IB
422.43750	IB
422.44375 *	IB
422.450	IB
422.45625 *	IB
422.46250	IB
422.46875 *	IB
422.475	IB
422.48125 *	IB
422.48750	IB
422.49375 *	IB
422.500	IB
422.50625 *	IB
422.51250	IB
422.51875 *	IB
422.525	IB
422.53125 *	IB
422.53750	IB
422.54375 *	IB
422.550	IB
422.55625 *	IB
422.56250	IB
422.56875 *	IB
422.575	IB
422.58125 *	IB
422.58750	IB
422.59375 *	IB
422.600	IB
422.60625 *	IB
422.61250	IB
422.61875 *	IB
422.625	IB
422.63125 *	IB
422.63750	IB
422.64375 *	IB
422.650	IB
422.65625 *	IB
422.66250	IB
422.66875 *	IB
422.675	IB
422.68125 *	IB
422.68750	IB
422.69375 *	IB
422.700	IB
422.70625 *	IB
422.71250	IB
422.71875 *	IB
422.725	IB
422.73125 *	IB
422.73750	IB
422.74375 *	IB
422.750	IB
422.75625 *	IB
422.76250	IB
422.76875 *	IB
422.775	IB
422.78125 *	IB
422.78750	IB
422.79375 *	IB
422.800	IB
422.80625 *	IB
422.81250	IB
422.81875 *	IB

TABLE 1—CHANNELS AVAILABLE IN DETROIT AND CLEVELAND AREAS ONLY—Continued

Frequency (MHz)	Pool in which assigned
422.825	IB
422.83125 *	IB
422.83750	IB
422.84375 *	IB
422.850	IB
422.85625 *	IB
422.86250	IB
422.86875 *	IB
422.875	IB
422.88125 *	IB
422.88750	IB
422.89375 *	IB
422.900	IB
422.90625 *	IB
422.91250	IB
422.91875 *	IB
422.925	IB
422.93125 *	IB
422.93750	IB
422.94375 *	IB
422.950	IB
422.95625 *	IB
422.96250	IB
422.96875 *	IB
422.975	IB
422.98125 *	IB
422.98750	IB
422.99375 *	IB
423.000	PS
423.00625 *	PS
423.01250	PS
423.01875 *	PS
423.025	PS
423.03125 *	PS
423.03750	PS
423.04375 *	PS
423.050	PS
423.05625 *	PS
423.06250	PS
423.06875 *	PS
423.075	PS
423.08125 *	PS
423.08750	PS
423.09375 *	PS
423.100	PS
423.10625 *	PS
423.11250	PS
423.11875 *	PS
423.125	PS
423.13125 *	PS
423.13750	PS
423.14375 *	PS
423.150	PS
423.15625 *	PS
423.16250	PS
423.16875 *	PS
423.175	PS
423.18125 *	PS
423.18750	PS
423.19375 *	PS
423.200	PS
423.20625 *	PS
423.21250	PS
423.21875 *	PS
423.225	PS
423.23125 *	PS
423.23750	PS
423.24375 *	PS
423.250	PS
423.25625 *	PS

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TABLE 1—CHANNELS AVAILABLE IN DETROIT AND CLEVELAND AREAS ONLY—Continued

Frequency (MHz)	Pool in which assigned
423.26250	PS
423.26875 *	PS
423.275	PS
423.28125 *	PS
423.28750	PS
423.29375 *	PS
423.300	PS
423.30625 *	PS
423.31250	PS
423.31875 *	PS
423.325	PS
423.33125 *	PS
423.33750	PS
423.34375 *	PS
423.350	PS
423.35625 *	PS
423.36250	PS
423.36875 *	PS
423.375	PS
423.38125 *	PS
423.38750	PS
423.39375 *	PS
423.400	PS
423.40625 *	PS
423.41250	PS
423.41875 *	PS
423.425	PS
423.43125 *	PS
423.43750	PS
423.44375 *	PS
423.450	PS
423.45625 *	PS
423.46250	PS
423.46875 *	PS
423.475	PS
423.48125 *	PS
423.48750	PS
423.49375 *	PS
423.500	PS
423.50625 *	PS
423.51250	PS
423.51875 *	PS
423.525	PS
423.53125 *	PS
423.53750	PS
423.54375 *	PS
423.550	PS
423.55625 *	PS
423.56250	PS
423.56875 *	PS
423.575	PS
423.58125 *	PS
423.58750	PS
423.59375 *	PS
423.600	PS
423.60625 *	PS
423.61250	PS
423.61875 *	PS
423.625	PS
423.63125 *	PS
423.63750	PS
423.64375 *	PS
423.650	PS
423.65625 *	PS
423.66250	PS
423.66875 *	PS
423.675	PS
423.68125 *	PS
423.68750	PS
423.69375 *	PS

TABLE 1—CHANNELS AVAILABLE IN DETROIT AND CLEVELAND AREAS ONLY—Continued

Frequency (MHz)	Pool in which assigned
423.700	PS
423.70625 *	PS
423.71250	PS
423.71875 *	PS
423.725	PS
423.73125 *	PS
423.73750	PS
423.74375 *	PS
423.750	PS
423.75625 *	PS
423.76250	PS
423.76875 *	PS
423.775	PS
423.78125 *	PS
423.78750	PS
423.79375 *	PS
423.800	PS
423.80625 *	PS

* This frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

TABLE 2—CHANNELS AVAILABLE IN BUFFALO, DETROIT AND CLEVELAND AREAS

Frequency (MHz)	Pool in which assigned
Paired channels:	
423.81875 *	PS
423.825	PS
423.83125 *	PS
423.83750	PS
423.84375 *	PS
423.850	PS
423.85625 *	PS
423.86250	PS
423.86875 *	PS
423.875	PS
423.88125 *	PS
423.88750	PS
423.89375 *	PS
423.900	PS
423.90625 *	PS
423.91250	PS
423.91875 *	PS
423.925	PS
423.93125 *	PS
423.93750	PS
423.94375 *	PS
423.950	PS
423.95625 *	PS
423.96250	PS
423.96875 *	PS
423.975	PS
423.98125 *	PS
423.98750	PS
423.99375 *	PS
424.000	PS
424.00625 *	PS
424.01250	PS
424.01875 *	PS
424.025	PS
424.03125 *	PS
424.03750	PS
424.04375 *	PS
424.050	PS
424.05625 *	PS
424.06250	PS
424.06875 *	PS

TABLE 2—CHANNELS AVAILABLE IN BUFFALO, DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
424.075	PS
424.08125 *	PS
424.08750	PS
424.09375 *	PS
424.100	PS
424.10625 *	PS
424.11250	PS
424.11875 *	PS
424.125	PS
424.13125 *	PS
424.13750	PS
424.14375 *	PS
424.150	PS
424.15625 *	PS
424.16250	PS
424.16875 *	PS
424.175	PS
424.18125 *	PS
424.18750	PS
424.19375 *	PS
424.200	PS
424.20625 *	PS
424.21250	PS
424.21875 *	PS
424.225	PS
424.23125 *	PS
424.23750	PS
424.24375 *	PS
424.250	PS
424.25625 *	PS
424.26250	PS
424.26875 *	PS
424.275	PS
424.28125 *	PS
424.28750	PS
424.29375 *	PS
424.300	PS
424.30625 *	PS
424.31250	PS
424.31875 *	PS
424.325	PS
424.33125 *	PS
424.33750	PS
424.34375 *	PS
424.350	PS
424.35625 *	PS
424.36250	PS
424.36875 *	PS
424.375	PS
424.38125 *	PS
424.38750	PS
424.39375 *	PS
424.400	IB
424.40625 *	IB
424.41250	IB
424.41875 *	IB
424.425	IB
424.43125 *	IB
424.43750	IB
424.44375 *	IB
424.450	IB
424.45625 *	IB
424.46250	IB
424.46875 *	IB
424.475	IB
424.48125 *	IB
424.48750	IB
424.49375 *	IB
424.500	IB
424.50625 *	IB

TABLE 2—CHANNELS AVAILABLE IN BUFFALO, DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
424.51250	IB
424.51875 *	IB
424.525	IB
424.53125 *	IB
424.53750	IB
424.54375 *	IB
424.550	IB
424.55625 *	IB
424.56250	IB
424.56875 *	IB
424.575	IB
424.58125 *	IB
424.58750	IB
424.59375 *	IB
424.600	IB
424.60625 *	IB
424.61250	IB
424.61875 *	IB
424.625	IB
424.63125 *	IB
424.63750	IB
424.64375 *	IB
424.650	IB
424.65625 *	IB
424.66250	IB
424.66875 *	IB
424.675	IB
424.68125 *	IB
424.68750	IB
424.69375 *	IB
424.700	IB
424.70625 *	IB
424.71250	IB
424.71875 *	IB
424.725	IB
424.73125 *	IB
424.73750	IB
424.74375 *	IB
424.750	IB
424.75625 *	IB
424.76250	IB
424.76875 *	IB
424.775	IB
424.78125 *	IB
424.78750	IB
424.79375 *	IB
424.800	IB
424.80625 *	IB
424.81250	IB
424.81875 *	IB
424.825	IB
424.83125 *	IB
424.83750	IB
424.84375 *	IB
424.850	IB
424.85625 *	IB
424.86250	IB
424.86875 *	IB
424.875	IB
424.88125 *	IB
424.88750	IB
424.89375 *	IB
424.900	IB
424.90625 *	IB
424.91250	IB
424.91875 *	IB
424.925	IB
424.93125 *	IB
424.93750	IB
424.94375 *	IB

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TABLE 2—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
424.950	IB
424.95625 *	IB
424.96250	IB
424.96875 *	IB
424.975	IB
424.98125 *	IB
424.98750	IB
424.99375 *	IB
Single channels:	
425.000	IB
425.00625 *	IB
425.01250	IB
425.01875 *	IB
425.025	IB
425.03125 *	IB
425.03750	IB
425.04375 *	IB
425.050	IB
425.05625 *	IB
425.06250	IB
425.06875 *	IB
425.075	IB
425.08125 *	IB
425.08750	IB
425.09375 *	IB
425.100	IB
425.10625 *	IB
425.11250	IB
425.11875 *	IB
425.125	IB
425.13125 *	IB
425.13750	IB
425.14375 *	IB
425.150	IB
425.15625 *	IB
425.16250	IB
425.16875 *	IB
425.175	IB
425.18125 *	IB
425.18750	IB
425.19375 *	IB
425.200	IB
425.20625 *	IB
425.21250	IB
425.21875 *	IB
425.225	IB
425.23125 *	IB
425.23750	IB
425.24375 *	IB
425.250	PS
425.25625 *	PS
425.26250	PS
425.26875 *	PS
425.275	PS
425.28125 *	PS
425.28750	PS
425.29375 *	PS
425.300	PS
425.30625 *	PS
425.31250	PS
425.31875 *	PS
425.325	PS
425.33125 *	PS
425.33750	PS
425.34375 *	PS
425.350	PS
425.35625 *	PS
425.36250	PS
425.36875 *	PS
425.375	PS

TABLE 2—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
425.38125 *	PS
425.38750	PS
425.39375 *	PS
425.400	PS
425.40625 *	PS
425.41250	PS
425.41875 *	PS
425.425	PS
425.43125 *	PS
425.43750	PS
425.44375 *	PS
425.450	PS
425.45625 *	PS
425.46250	PS
425.46875 *	PS
425.475	PS
425.48125 *	PS

* This frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(b) [Reserved]

(c) Base or control stations shall be located within 48 km (30 miles) of the center of Buffalo or 80 km (50 miles) of the center of Detroit. In Cleveland, base or control stations will be allowed at locations north of line A that are within 48 km (30 miles) of the city center. In addition, low power (2 watts or less) base stations may locate within 80 km (50 miles) of the center of Buffalo. The following coordinates shall be used for the centers of these areas:

Buffalo, NY 42°52'52" North latitude.
78°52'21" West longitude.
Cleveland, OH 41°29'51" North latitude.
81°41'50" West longitude.
Detroit, MI 42°19'48" North latitude.
83°02'57" West longitude.

(d) Mobile operation shall be confined to within 80 km (50 miles) of the centers of Detroit, Cleveland, or Buffalo.

[52 FR 6156, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989; 58 FR 31476, June 3, 1993; 58 FR 44957, Aug. 25, 1993; 60 FR 37269, July 19, 1995; 61 FR 6576, Feb. 21, 1996; 62 FR 18929, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18929, Apr. 17, 1997, § 90.273 was amended by revising the first two sentences and Tables 1 and 2 of paragraph (a) and removing and reserving paragraph (b), effective Oct. 17, 1997.

§ 90.275 Selection and assignment of frequencies in the 421–430 MHz band.

Applicants must specify the frequencies in which the proposed system

§ 90.279

will operate pursuant to a recommendation by a frequency coordinator certified for the pool in which the requested frequency is assigned.

[62 FR 18932, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18932, Apr. 17, 1997, § 90.275 was revised, effective Oct. 17, 1997.

§ 90.279 Power limitations applicable to the 421–430 MHz band.

(a) Base station authorizations in the 421–430 MHz band will be subject to Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations as shown in the table below. ERP is defined as the product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction. EAH is calculated by subtracting the Assumed Average Terrain Elevation (AATE) as listed in table 7 of § 90.619 from the antenna height above mean sea level.

LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO EFFECTIVE ANTENNA HEIGHTS (EAH) OF BASE STATIONS IN THE 421–430 MHz BAND

Effective antenna height (EAH) in meters (feet)	Maximum effective radiated power (ERP) (watts)
0–152 (0–500)	250
Above 152–305 (above 500–1000)	150
Above 305–457 (above 1000–1500)	75
Above 457–610 (above 1500–2000)	40
Above 610–762 (above 2000–2500)	20
Above 762–914 (above 2500–3000)	15
Above 914–1219 (above 3000–4000)	10
Above 1219 (above 4000)	5

(b) The maximum transmitter power output that will be authorized for control stations is 20 watts.

[52 FR 6157, Mar. 2, 1987, as amended at 58 FR 44957, Aug. 25, 1993]

§ 90.281 Restrictions on operational fixed stations in the 421–430 MHz band.

(a) Except for control stations, operational fixed facilities will not be authorized in the 421–430 MHz band. This does not preclude secondary fixed tone signaling and alarm operations authorized in § 90.235.

(b) Control stations associated with one or more mobile relay stations will

be authorized only on the assigned frequency of the associated mobile station. Use of a mobile service frequency by a control station of a mobile relay system is subject to the condition that harmful interference shall not be caused to stations of licensees authorized to use the frequency for mobile service communications.

[52 FR 6158, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989]

§ 90.283 Inter-service sharing of maritime frequencies in the 156–162 MHz band.

(a) The following frequency pairs may be assigned to any eligible applicant that meets the definition of a Power, Petroleum, Forest products, Film and video production, Relay press, Special industrial, Manufacturers, Telephone maintenance, Motor carrier, Railroad, Taxicab, or Automobile emergency licensee, as defined in § 90.7, for licensing in the Industrial/Business Pool for duplex operation within the 48 contiguous states in accordance with the rules of § 90.35, the conditions set forth in this section, and the CANADA/U.S.A. channeling agreement for VHF maritime public correspondence found in § 80.57 of this chapter.

FREQUENCY (MHZ)	
Mobile station transmit	Mobile station transmit
157.200	161.800
157.20625 ¹	¹ 161.80625
157.2125 ²	² 161.8125
157.21875 ¹	¹ 161.81875
157.225	161.825
157.23125 ¹	¹ 161.83125
157.2375 ²	² 161.8375
157.24375 ¹	¹ 161.84375
157.250	161.850
157.25625 ¹	¹ 161.85625
157.2625 ²	² 161.8625
157.26875 ¹	¹ 161.86875
157.275	161.875
157.28125 ¹	¹ 161.88125
157.2875 ²	² 161.8875
157.29375 ¹	¹ 161.89375
157.300	161.900
157.30625 ¹	¹ 161.90625
157.3125 ²	² 161.9125
157.31875 ¹	¹ 161.91875
157.325	161.925
157.33125 ¹	¹ 161.93125
157.3375 ²	² 161.9375
157.34375 ¹	¹ 161.94375
157.350	161.950
157.35625 ¹	¹ 161.95625
157.3625 ²	² 161.9625
157.36875 ¹	¹ 161.96875

FREQUENCY (MHz)—Continued

Mobile station transmit	Mobile station transmit
157.375	161.975
157.38125 ¹	¹ 161.98125
157.3875 ²	² 161.9875
157.39375 ¹	¹ 161.99375
157.400	162.000

¹This frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

²This frequency will be assigned with an authorized bandwidth not to exceed 11.25 kHz.

(b) Assignment will be made only when VHF frequencies available for assignment under this part are unavailable due to congestion, as determined by a certified private land mobile frequency coordinator. Applicants must provide evidence of frequency coordination in accordance with §90.175.

(c) Station power, as measured at the output terminals of the transmitter, must not exceed 50 watts for base stations and 20 watts for mobile stations, except in accordance with the provi-

sions of paragraph (g) of this section. Antenna height (HAAT) must not exceed 122 meters (400 feet) for base stations and 4.5 meters (15 feet) for mobile stations, except in accordance with paragraph (g) of this section. Such base and mobile stations must not be operated on board aircraft in flight.

(d) The following table, along with the antenna height (HAAT) and power (ERP), must be used to determine the minimum separation required between proposed base stations and each of the following:

(1) Co-channel public coast stations licensed under part 80 of this chapter,

(2) The coastline of any navigable waterway,

(3) Grandfathered public safety licensees operating on 157.35 MHz or 161.85 MHz. Applicants whose exact ERP or HAAT are not reflected in the table must use the next highest figure shown.

REQUIRED SEPARATION IN KILOMETERS (MILES) OF BASE STATION FROM COASTLINES/PUBLIC COAST STATIONS

Base Station Characteristics					
HAAT	ERP (watts)				
Meters (feet)	400	300	200	100	50
15 (50)	138 (86)	135 (84)	129 (80)	121 (75)	116 (72)
30 (100)	154 (96)	151 (94)	145 (90)	137 (85)	130 (81)
61 (200)	166 (103)	167 (104)	161 (100)	153 (95)	145 (90)
122 (400)	187 (116)	177 (110)	183 (114)	169 (105)	159 (99)

(e) In the event of interference, the Commission may require, without a hearing, licensees of base stations authorized under this section that are located within 241 kilometers (150 miles) of an existing, co-channel public coast station, grandfathered co-channel public safety station or an international border to reduce radiated power, decrease antenna height, and/or install directional antennas. Mobile stations must operate only within radio range of their associated base station.

(f) Individual waiver requests to operate on a secondary, non-interference, basis will be considered in cases where the applicant's base station satisfies the requirements of paragraphs (d) (1) and (3) of this section but does not satisfy the requirements of paragraph (d)(2) of this section. All waiver requests must be submitted in accordance with §1.931 of the chapter. Such secondary operations must cease immediately upon notification by the Commission that the station is causing interference to maritime operations.

(g) Applicants seeking to be licensed for stations exceeding the power/antenna height limits of the table in paragraph (d) of this section are required to secure a waiver and must submit with the application, an interference analysis, based upon any of the generally-accepted terrain-based propagation models, that shows that co-channel protected entities, described in paragraph (d) of this section, would receive the same or greater interference protection than provided in the table.

[60 FR 35510, July 10, 1995, as amended at 62 FR 2041, Jan. 15, 1997; 62 FR 18932, Apr. 17, 1997]

§ 90.301

EFFECTIVE DATE NOTE: At 62 FR 18932, Apr. 17, 1997, §90.283 was amended by revising the introductory text of paragraph (a), effective Oct. 17, 1997.

Subpart L—Authorization in the Band 470–512 MHz (UHF-TV Sharing)

§90.301 Scope.

This subpart governs the authorization and use of frequencies by land mobile stations in the band 470–512 MHz on a geographically shared basis with Television Broadcast stations. Under this special sharing plan, different fre-

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quencies are allocated depending on the geographic urban area involved as fully detailed in the following rule sections.

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18932, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18932, Apr. 17, 1997, §90.301 was amended by revising the last sentence, effective Oct. 17, 1997.

§90.303 Availability of frequencies.

(a) Frequencies in the band 470–512 MHz are available for assignment in the urbanized areas listed below. The specific frequencies available are listed in §90.311.

FREQUENCY AVAILABILITY FOR LAND MOBILE USE

Urbanized area	Geographic center		Chan- nel	Frequencies (megahertz)
	North latitude	West lon- gitude		
Boston, MA	42°21'24"	71°03'25"	14	470–476
Chicago, IL ¹	41°52'28"	87°38'22"	16	482–488
Cleveland, OH ²	41°29'51"	81°41'50"	14	470–476
Dallas/Fort Worth, TX	32°47'09"	96°47'37"	15	476–482
Detroit, MI ³	42°19'48"	83°02'57"	16	482–488
Houston, TX	29°45'26"	95°21'37"	15	476–482
Los Angeles, CA ⁴	34°03'15"	118°14'28"	16	482–488
Miami, FL	25°46'37"	80°11'32"	17	488–494
New York/N.E. NJ	40°45'06"	73°59'39"	14	470–476
Philadelphia, PA	39°56'58"	75°09'21"	15	476–482
Pittsburgh, PA	40°26'19"	80°00'00"	19	500–506
San Francisco/Oakland, CA	37°46'39"	122°24'40"	20	506–512
Wash., DC/MD/VA	38°53'51"	77°00'33"	14	470–476
			18	494–500

¹ In the Chicago, IL, urbanized area, channel 15 frequencies may be used for paging operations in addition to low power base/mobile usages, where applicable protection requirements for ultrahigh frequency television stations are met.

² Channels 14 and 15 are not available in Cleveland, OH, until further order from the Commission.

³ Channels 15 and 16 are not available in Detroit, MI, until further order from the Commission.

⁴ Channel 16 is available in Los Angeles for use by public safety users.

(b) [Reserved]

[43 FR 54791, Nov. 22, 1978, 44 FR 32220, June 5, 1979, as amended at 50 FR 39681, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 51 FR 4361, Feb. 4, 1986; 52 FR 29856, Aug. 12, 1987; 62 FR 18932, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18932, Apr. 17, 1997, §90.303 was amended by revising the last sentence of paragraph (a) introductory text, effective Oct. 17, 1997.

§90.305 Location of stations.

(a) The transmitter site(s) for base station(s), including mobile relay stations, shall be located not more than 80 km. (50 mi.) from the geographic center of the urbanized area listed in §90.303.

(b) Mobile units shall be operated within 48 km. (30 mi.) of their associated base station or stations. Such units may not be operated aboard aircraft in flight except as provided for in §90.315(i).

(c) Control stations must be located within the area of operation of the mobile units.

(d) Base and control stations shall be located a minimum of 1.6 km. (1 mi.) from local television stations operating on UHF TV channels separated by 2, 3, 4, 5, 7, and 8 TV channels from the television channel in which the base station will operate.

§ 90.307 Protection criteria.

The tables and figures listed in § 90.309 shall be used to determine the proper power (ERP) and antenna height of the proposed land mobile base station and the proper power (ERP) for the associated control station (control station antenna height shall not exceed 31 m. (100 ft.) above average terrain (AAT)).

(a) Base stations operating on the frequencies available for land mobile use in any listed urbanized area and having an antenna height (AAT) less than 152 m. (500 ft.) shall afford protection to co-channel and adjacent channel television stations in accordance with the values set out in tables A and E of this subpart, except for Channel 15 in New York, NY, and Cleveland, OH, and Channel 16 in Detroit, MI, where protection will be in accordance with the values set forth in tables B and E.

(b) For base stations having antenna heights between 152-914 meters (500-3,000 ft.) above average terrain, the effective radiated power must be reduced below 1 kilowatt in accordance with the values shown in the power reduction graph in Figure A, except for Channel 15 in New York, NY, and Cleveland, OH, and Channel 16 in Detroit, MI, where the effective radiated power must be reduced in accordance with Figure B. For heights of more than 152 m. (500 ft.) above average terrain, the distance to the radio path horizon will be calculated assuming smooth earth. If the distance so determined equals or exceeds the distance to the Grade B contour of a co-channel TV station, (Grade B contour defined in § 73.683(a)) an authorization will not be granted unless it can be shown that actual terrain considerations are such as to provide the desired protection at the Grade B contour, or that the effective radiated power will be further re-

duced so that, assuming free space attenuation, the desired protection at the Grade B contour will be achieved.

(c) Mobile units and control stations operating on the frequencies available for land mobile use in any given urbanized area shall afford protection to co-channel and adjacent channel television stations in accordance with the values set forth in table C and paragraph (d) of this section except for Channel 15 in New York, NY, and Cleveland, OH, and Channel 16 in Detroit, MI, where protection will be in accordance with the values set forth in table D and paragraph (d) of this section.

(d) The minimum distance between a land mobile base station which has associated mobile units and a protected adjacent channel television station is 145 km (90 miles) .

(e) The television stations to be protected (co-channel, adjacent channel, IM, and IF) in any given urbanized area, in accordance with the provisions of paragraphs (a), (b), (c), and (d) of this section, are identified in the commission's publication "TV stations to be considered in the preparation of Applications for Land Mobile Facilities in the Band 470-512 MHz." The publication is available at the offices of the Federal Communications Commission at Washington, DC or upon the request of interested persons.

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 36107, Sept. 14, 1984; 58 FR 44957, Aug. 25, 1993]

§ 90.309 Tables and figures.

(a) *Directions for using the tables.* (1) Using the method specified in § 73.611 or charts or maps of suitable scale, determine the distances (i) between the proposed land mobile base station and the protected cochannel television station and (ii) between the proposed land mobile base station and the protected adjacent channel television station. If the exact mileage does not appear in table A for protected cochannel television stations (or table B for Channel 15 in New York and Cleveland and channel 16 in Detroit) or table E for protected adjacent channel television stations, the next lower mileage separation figure is to be used.

(2) Entering the proper table at the mileage figure found in paragraph (a)(1) of this section, find opposite, a selection of powers that may be used for antenna heights ranging from 15 m (50 ft) to 152.5 m (500 ft) (AAT). If the exact antenna height proposed for the land mobile base station does not appear in the proper table, use the power figure beneath the next greater antenna height.

(3) The lowest power found using the tables mentioned in paragraphs (a)(1) and (a)(2) of this section is the maximum power that may be employed by the proposed land mobile base station.

(4) In determining the average elevation of the terrain, the elevations between 3.2 km (2 mi) and 16 km (10 mi) from the antenna site are employed. Profile graphs shall be drawn for a minimum of eight radials beginning at the antenna site and extending 16 km (10 mi). The radials should be drawn starting with true north. At least one radial should be constructed in the direction of the nearest cochannel and adjacent channel UHF television stations. The profile graph for each radial shall be plotted by contour intervals of from 12.2 m (40 ft) to 30.5 m (100 ft) and, where the data permits, at least 50 points of elevation (generally uniformly spaced) should be used for each radial. For very rugged terrain 61 m (200 ft) to 122 m (400 ft) contour inter-

vals may be used. Where the terrain is uniform or gently sloping, the smallest contour interval indicated on the topographic chart may be used. The average elevation of the 12.8 km (8-mile) distance between 3.2 km (2 mi) and 16 km (10 mi) from the antenna site should be determined from the profile graph for each radial. This may be obtained by averaging a large number of equally spaced points, by using a planimeter, or by obtaining the median elevation (that exceeded by 50 percent of the distance) in sectors and averaging those values. In the preparation of the profile graphs, the elevation or contour intervals may be taken from U.S. Geological Survey Topographic Maps, U.S. Army Corps of Engineers Maps, or Tennessee Valley Authority Maps. Maps with a scale of 1:250,000 or larger (such as 1:24,000) shall be used. Digital Terrain Data Tapes, provided by the National Cartographic Institute, U.S. Geological Survey, may be utilized in lieu of maps, but the number of data points must be equal to or exceed that special above. If such maps are not published for the area in question, the next best topographic information should be used.

(5) Applicants for base stations in the Miami, FL, urbanized area may, in lieu of calculating the height of average terrain, use 3 m (10 ft) as the average terrain height.

TABLE A—BASE STATION—COCHANNEL FREQUENCIES (50 dB PROTECTION) MAXIMUM EFFECTIVE RADIATED POWER (ERP) ¹

Distance in kilometers (miles): ²	Antenna height in meters (feet) (AAT)									
	15 (50)	30.5 (100)	45 (150)	61 (200)	76 (250)	91.5 (300)	106 (350)	122 (400)	137 (450)	152.5 (500)
260 (162)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
257 (160)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	800
249 (155)	1,000	1,000	1,000	1,000	1,000	875	775	700	625	575
241 (150)	1,000	1,000	950	775	725	625	550	500	450	400
233 (145)	850	750	650	575	500	440	400	350	320	300
225 (140)	600	575	475	400	350	300	275	250	230	225
217 (135)	450	400	335	300	255	240	200	185	165	150
209 (130)	350	300	245	200	185	160	145	125	120	100
201 (125)	225	200	170	150	125	110	100	90	80	75
193 (120)	175	150	125	105	90	80	70	60	55	50

¹ The effective radiated power (ERP) and antenna height above average terrain (AAT) shall not exceed the values given in this table.

² At this distance from transmitter site of protected UHF television station.

TABLE B—BASE STATION—COCHANNEL FREQUENCIES (40 dB PROTECTION) MAXIMUM EFFECTIVE RADIATED POWER (ERP) ¹

Distance in kilometers (miles): ²	Antenna height in meters (feet) (AAT)									
	15 (50)	30.5 (100)	45 (150)	61 (200)	76 (250)	91.5 (300)	106 (350)	122 (400)	137 (450)	152.5 (500)
209 (130)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
201 (125)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	850	750	725
193 (120)	1,000	1,000	1,000	1,000	900	750	675	600	550	500
185 4(115)	1,000	1,000	800	725	600	525	475	425	375	350
177 (110)	850	700	600	500	425	375	325	300	275	225
169 (105)	600	475	400	325	275	250	225	200	175	150
161 (100)	400	325	275	225	175	150	140	125	110	100
153 (95)	275	225	175	125	110	95	80	70	60	50
145 (90)	175	125	100	75	50	.....	.....	.....	.....	.....

¹ The effective radiated power (ERP) and antenna height above average terrain (AAT) shall not exceed the values given in this table.

² At this distance from transmitter site of protected UHF television station.

TABLE C—MOBILE AND CONTROL STATION—DISTANCE BETWEEN ASSOCIATED BASE STATION AND PROTECTED COCHANNEL TV STATION

[50 dB protection]

Effective radiated power (watts) of mobile unit and control station	Distance	
	Kilometers	Miles
200	249	155
150	243	151
100	233	145
50	217	135
25	201	125
10	188	117
5	180	112

TABLE D—MOBILE AND CONTROL STATION—DISTANCE BETWEEN ASSOCIATED LAND MOBILE BASE STATION AND PROTECTED COCHANNEL TV STATION

[40 dB protection]

Effective radiated power (watts) of mobile unit and control station	Distance	
	Kilometers	Miles
200	209	130
150	201	125
100	193	120
50	185	115
25	177	110
10	169	105
5	161	100

TABLE E—BASE STATION ADJACENT CHANNEL FREQUENCIES MAXIMUM EFFECTIVE RADIATED POWER (ERP) ¹

Distance in kilometers (miles): ^{2,3}	Antenna height in meters (feet) (AAT)									
	15 (50)	30.5 (100)	45 (150)	61 (200)	76 (250)	91.5 (300)	106 (350)	122 (400)	137 (450)	152.5 (500)
108 (67)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
106 (66)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	750
104 (65)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	825	650	600
103 (64)	1,000	1,000	1,000	1,000	1,000	1,000	775	625	500	400
101 (63)	1,000	1,000	1,000	1,000	1,000	650	450	325	325	225
99 (62)	1,000	1,000	1,000	1,000	525	375	250	200	150	125
98 (61)	1,000	1,000	700	450	250	200	125	100	75	50
96 (60)	1,000	1,000	425	225	125	100	75	50	.....	.....

¹ The effective radiated power (ERP) and antenna height above average terrain (AAT) shall not exceed the values given in this table.

² At this distance from transmitter site of protected UHF television station.

³ The minimum distance is 145 km (90 miles) where there are mobile units associated with the base station. See sec. 90.307(d).

TABLE "F"—DECIBEL REDUCTION/POWER EQUIVALENTS

dB reduction below 1 kW	ERP permitted (figures rounded)
1	795
2	630
3	500
4	400
5	315

TABLE "F"—DECIBEL REDUCTION/POWER EQUIVALENTS—Continued

dB reduction below 1 kW	ERP permitted (figures rounded)
6	250
7	200
8	160
9	125
10	100

TABLE “F”—DECIBEL REDUCTION/POWER
EQUIVALENTS—Continued

dB reduction below 1 kW	ERP per- mitted (fig- ures rounded)
11	80
12	65
13	50
14	40
15	30
16	25
17	20
18	15
19	12
20	10
21	8
22	6
23	5
24	4
25	3
26	2.5
27	2
28	1.5
29	1.25
30	1

(b) *Directions for Using the Figures.* (1) Determine antenna height above average terrain. (According to §90.309(a)(4).)

(2) Locate this value on the antenna height axis.

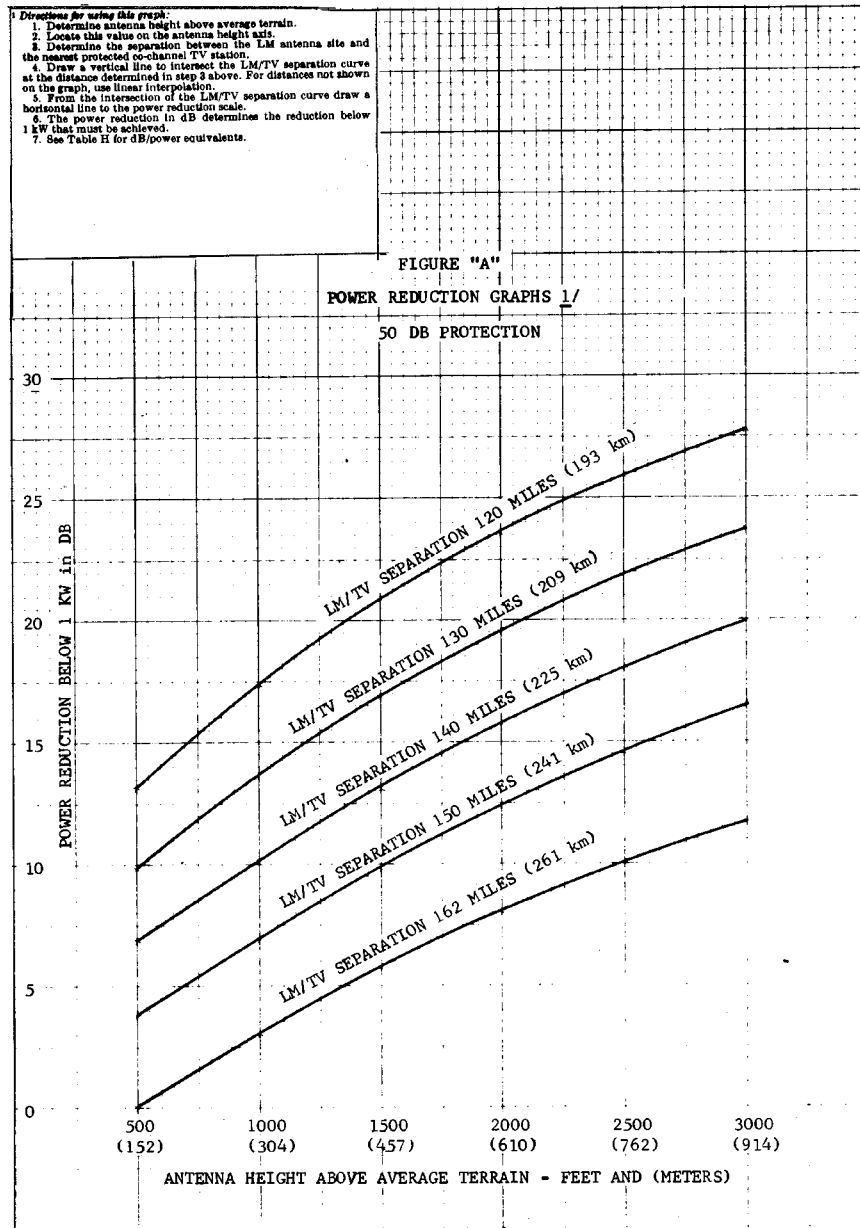
(3) Determine the separation between the LM antenna site and the nearest protected co-channel TV station. (According to §73.611.)

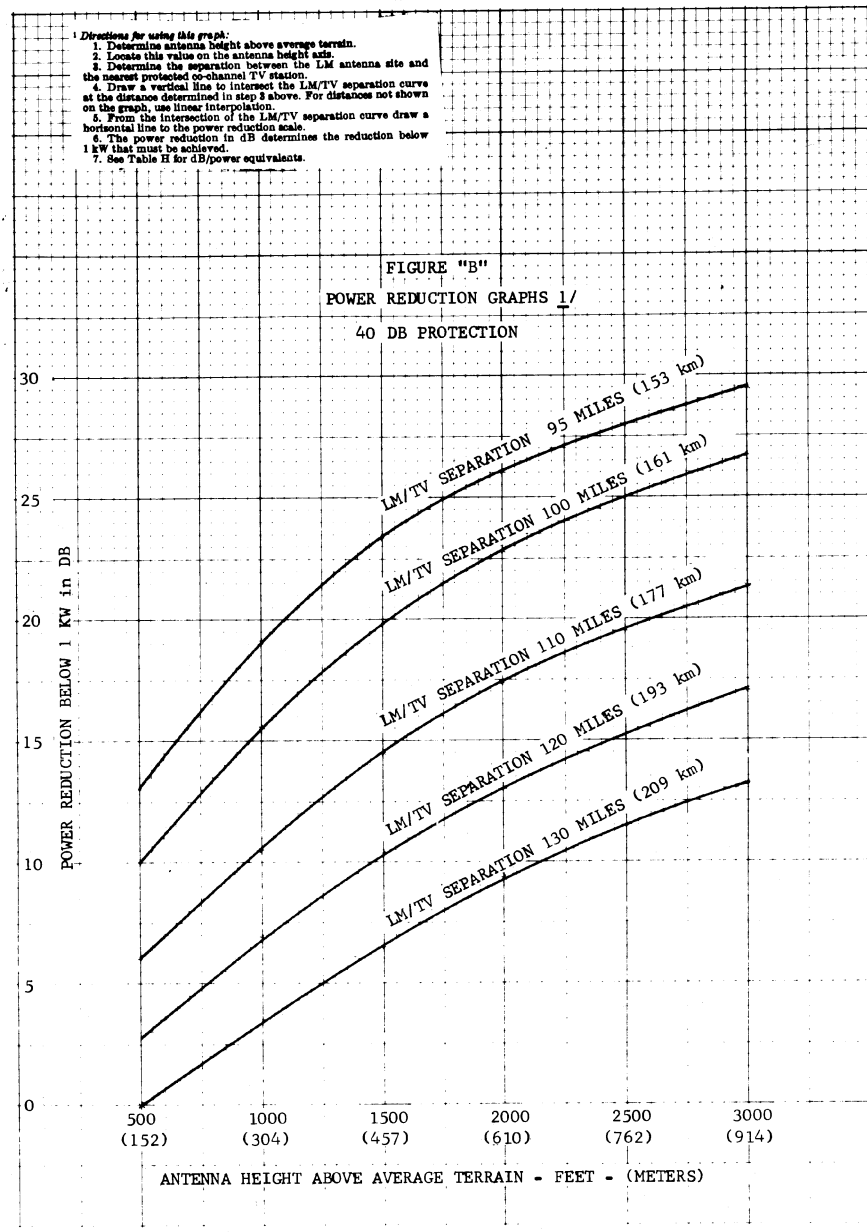
(4) Draw a vertical line to intersect the LM/TV separation curve at the distance determined in step 3 above. For distances not shown in the graph use linear interpolation.

(5) From the intersection of the LM/TV separation curve draw a horizontal line to the power reduction scale.

(6) The power reduction in dB determines the reduction below 1 kW that must be achieved.

(7) See table F for dB/power equivalents.





(Section 0.231(d) of the Commission's Rules and secs. 4(i) and 303 of the Communications Act, as amended)

[43 FR 54791, Nov. 22, 1978, as amended at 49 FR 36107, Sept. 14, 1984; 49 FR 49837, Dec. 17, 1984; 58 FR 44958, Aug. 25, 1993]

§ 90.311 Frequencies.

(a) Except as provided for in § 90.315 and except for those frequencies allocated to services in part 22 of this chapter (see §§ 22.591, 22.621, 22.651, and 22.1007 of this chapter) the following frequencies in the band 470–512 MHz

may be assigned as indicated in the table below. The first and last assignable frequencies are shown. Assignable frequencies occur in increments of 6.25 kHz. The separation between base and mobile transmit frequencies is 3 MHz for two frequency operation.

Channel assignment	Urbanized area	General access pool	
		Base and mobile	Mobile
14	Boston, MA Chicago, IL Cleveland, OH Los Angeles, CA Miami, FL New York/N.E. NJ Pittsburgh, PA	470.30625 to 472.99375	473.30625 to 475.99375.
15	Chicago, IL Cleveland, OH Detroit, MI New York/N.E. NJ	476.30625 to 478.99375	479.30625 to 481.99375.
16	Boston, MA Dallas/Fort Worth, TX Detroit, MI San Francisco/Oakland, CA	482.30625 to 484.99375	485.30625 to 487.99375.
17	Houston, TX San Francisco/Oakland, CA Washington, DC/MD/VA	488.30625 to 490.99375	491.30625 to 493.99375.
18	Pittsburgh, PA Washington, DC/MD/VA	494.30625 to 496.99375	497.30625 to 499.99375.
19	Philadelphia, PA	500.30625 to 502.99375	503.30625 to 505.99375.
20	Los Angeles, CA Philadelphia, PA	506.30625 to 508.99375	509.30625 to 511.99375.

(1) Channel availability in the General Access Pool in any of the urbanized areas referred to in the table depends on whether that channel is presently assigned to one of the following categories of users:

(i) Public safety (as defined in § 90.20(a));

(ii) Power and telephone maintenance licensees (as defined in § 90.7);

(iii) Special industrial licensees (as defined in § 90.7);

(iv) Business licensees (as defined in § 90.35(a));

(v) Petroleum, forest products, and manufacturers licensees (as defined in § 90.7);

(vi) Railroad, motor carrier, and automobile emergency licensees (as defined in § 90.7); and

(vii) Taxicab licensees (as defined in § 90.7).

(2) If assigned, subsequent authorizations will only be granted to users from the same category. If unassigned, or should a channel subsequently become unassigned, it will be treated as available in the General Access Pool.

(3) Normally, each channel should be substantially loaded in accordance with the standards set out in § 90.313.

(4) The following frequencies will be authorized a maximum bandwidth of 6 kHz.

Channel	Frequency
14	470.30625 475.99375
15	476.30625 481.99375
16	482.30625 487.99375
17	488.30625 493.99375
18	494.30625 499.99375
19	500.30625 505.99375
20	506.30625 511.99375

(b) [Reserved]

[43 FR 54791, Nov. 22, 1978, as amended at 44 FR 49692, Aug. 24, 1979; 51 FR 4362, Feb. 4, 1986; 60 FR 37272, July 19, 1995; 62 FR 2041, Jan. 15, 1997; 62 FR 18932, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18932, Apr. 17, 1997, § 90.311 was amended by revising the

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introductory text and table of paragraph (a) and paragraphs (a)(1) and (a)(2), redesignating paragraph (a)(3) as paragraph (a)(4), adding a new paragraph (a)(3), and removing and reserving paragraph (b), effective Oct. 17, 1997. For the convenience of the user, the superseded text not appearing in the Oct. 1, 1996 revision is set forth as follows:

§ 90.311 Frequencies.

* * * * *

(b) Miami, FL, Dallas, TX, and Houston, TX urbanized areas. Only the first and last assignable frequencies are shown. Assignable frequencies will occur in increments of 6.25 kHz. Frequencies listed in paragraph (a)(3) of this section will only be assigned with a maximum authorized bandwidth of 6 kHz.

* * * * *

§ 90.313 Frequency loading criteria.

(a) Except as provided for in paragraph (b) of this section, the maximum channel loading on frequencies in the 470–512 MHz band is as follows:

(1) 50 units for systems eligible in the Public Safety Pool (see § 90.20(a)).

(2) 90 units for systems eligible in the Industrial/Business Pool (see § 90.35(a)).

(b) If a licensee has exclusive use of a frequency, then the loading standards in paragraph (a) of this section, may be exceeded. If it is a shared channel, the loading standards can be exceeded upon submission of a signed statement by all those sharing the channel agreeing to the increase.

(c) A unit is defined as a mobile transmitter-receiver. Loading standards will be applied in terms of the number of units actually in use or to be placed in use within 8 months following authorization. A licensee will be required to show that an assigned frequency pair is at full capacity before it may be assigned a second or additional frequency pair. Channel capacity may be reached either by the requirements of a single licensee or by several users sharing a channel. Until a channel is loaded to capacity it will be available for assignment to other users in the same area. A frequency pair may be reassigned at distances 64 km. (40 mi.), 32 km. (20 mi.) for Channel 15, Chicago; Channel 20, Philadelphia; and Channel 17, Washington, or more from the location of base stations authorized on that

pair without reference to loading at the point of original installation. Following authorization, the licensee shall notify the Commission either during or at the close of the 8 month period of the number of units in operation. In the Industrial Radio Services, if the base station facility is to be used by more than a single licensee, the frequency assigned to it will not be reassigned for use by another facility within 64 km. (40 mi.) or 32 km. (20 mi.) where applicable for a period of 12 months, *Provided*, That the facility is constructed within 90 days from the date of the first grant, meets the loading standards to at least 50 percent within 9 months, and meets all loading standards within 12 months.

[43 FR 54791, Nov. 22, 1978, as amended at 47 FR 36649, Aug. 23, 1982; 62 FR 18933, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18933, Apr. 17, 1997, § 90.313 was amended by revising paragraph (a), effective Oct. 17, 1997.

§ 90.315 Special provisions governing use of frequencies in the 476–494 MHz band (TV Channels 15, 16, 17) in the Southern Louisiana-Texas Offshore Zone.

(a) The frequency bands from 490–491 and 493–494 MHz will be available for assignment to stations governed by this part within Zone A. The boundaries of Zone A are from longitude 87°45′ on the east to longitude 94°00′ on the west, and from the 3-mile limit along the Gulf of Mexico shoreline on the north to the limit of the Outer Continental Shelf on the south. The frequency bands from 484–485 and 476–488 MHz will be available for assignment to stations governed by this part within Zone B. The boundaries of Zone B are from longitude 87°45′ on the east to longitude 95°00′ on the west and from the 3-mile limit along the Gulf of Mexico shoreline on the north to the limit of the Outer Continental Shelf on the south. The frequency bands from 478–479 and 481–481 MHz will be available for assignment to stations governed by this part within Zone C. The boundaries of Zone C are from longitude 94°00′ on the east, the 3-mile limit on the north and west, a 281 km (175 mile) radius from the reference point at

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Linares, N.L., Mexico on the southwest, latitude 26°00' on the south, and the limits of the Outer Continental Shelf on the southeast. These frequencies may also be assigned to fixed stations located on shore designed to provide communications service within the zone.

(b) Offshore base/mobile, and offshore and shore fixed stations may be authorized.

(c) F2, F3, F4, F9, and A2, A3, A4, and A9 emissions may be authorized.

(d) Offshore stations shall afford co-channel protection to TV stations on Channels 15, 16 and 17. Station operating parameters shall be in accordance with the values given in table 1 of this section.

TABLE 1—PROTECTION OF COCHANNEL TELEVISION STATIONS BY OFFSHORE STATIONS OPERATING IN THE SOUTHERN LOUISIANA-TEXAS OFFSHORE ZONE (65 DB PROTECTION); MAXIMUM EFFECTIVE RADIATED POWER
[In Watts]

Distance from transmitter to co-channel TV station kilometers (miles)	Antenna Height above sea level meters (feet)		
	30.5 (100)	45 (150)	61 (200)
338 (210)	1,000	1,000	1,000
330 (205)	1,000	900	800
322 (200)	800	710	630
314 (195)	590	520	450
306 (190)	450	400	330
298 (185)	320	280	240
290 (180)	250	210	175
281 (175)	175	150	130
274 (170)	130	110	100
265 (165)	95	80	70
257 (160)	65	55	50
249 (155)	50	40	35

TABLE 2.—MAXIMUM REARWARD EFFECTIVE RADIATED POWER ALLOWED FOR SHORE STATIONS; REARWARD EFFECTIVE RADIATED POWER (IN WATTS) FROM SHORE ANTENNA IN A SECTOR $<\pm 22\frac{1}{2}^\circ$ FROM THE LINE JOINING THE SHORE ANTENNA TO THE COCHANNEL TELEVISION STATION

Distance from transmitter to cochannel television station: kilometers (miles)	Antenna height above ground in meters (feet)					
	30.5 (100)	45 (150)	61 (200)	91.5 (300)	152.5 (500)	228 (750)
298 (185)	320	280	240	190	125	90
290 (180)	250	210	175	125	100	60
281 (175)	175	150	130	100	70	50
274 (170)	130	110	100	75	40	35
265 (165)	95	82	70	50	35	25
257 (160)	65	55	50	40	25	20
249 (155)	50	40	35	30	20	15
241 (150)	35	30	25	20	15	10
233 (145)	25	20	18	15	10	7
225 (140)	18	15	13	10	7	5
217 (135)	13	10	9	7	5	3
209 (130)	10	8	6	5	3	2
201 (125)	7	6	5	4	3	2
193 (120)	5	4	3	3	2	1

TABLE 1—PROTECTION OF COCHANNEL TELEVISION STATIONS BY OFFSHORE STATIONS OPERATING IN THE SOUTHERN LOUISIANA-TEXAS OFFSHORE ZONE (65 DB PROTECTION); MAXIMUM EFFECTIVE RADIATED POWER—Continued

Distance from transmitter to co-channel TV station kilometers (miles)	Antenna Height above sea level meters (feet)		
	30.5 (100)	45 (150)	61 (200)
241 (150)	35	30	25

NOTE: To determine the maximum permissible effective radiated power:

(1) As specified in §73.611 determine the distance between the proposed station and the cochannel television station. If the exact distance does not appear in table 1 of this section, the next lower distance separation is to be used.

(2) Opposite this distance figure ERPs are given that may be used for antenna heights of 30.5, 45 or 61 meters (100, 150 or 200 ft) ASL. If the exact antenna height is not shown, the ERP allowed will be that shown for the next higher antenna height.

(e) Shore stations communicating point-to-point with offshore stations will be permitted at least the same ERP as the offshore station, but only in the direction of the offshore station. A directional antenna shall be used and the rearward radiated power from the antenna in a sector $\pm 22\frac{1}{2}^\circ$ from the line joining the shore antenna to the co-channel television station shall not exceed those shown in table 2 of this section.

NOTE: As an example of the use of tables 1 and 2, assume an offshore station located 290 km (180 mi) from TV Channel 17 located in Bude, Miss. with an antenna height of 30.5 m (100 ft). Table 1 allows this station to operate with 250 W ERP. Now assume the shore station communicating with the offshore station is 48 km (30 mi) from the offshore station and 241 km (150 mi) from Bude, Miss. The shore station antenna height is 152.5 m (500 ft) above ground. The shore station will be allowed the same ERP as the offshore station (250 W) in the direction of the offshore station. Table 2 indicates that the effective radiated power in a sector $\leq 22\frac{1}{2}^\circ$ from the line joining the shore antenna to Bude, Miss. can only be 15 W. Consequently, a directional antenna must be used whose minimum front-to-back ratio over this 45° sector must be at least 12.2 dB. (250 W forward power to 15 W rearward power is a power ratio of 16.6 or 12.2 dB).

(f) To provide cochannel protection to television stations, no shore station will be allowed closer than 193 km (120 miles) from the cochannel television station.

(g) To provide adjacent channel protection to television stations, no shore or offshore station shall be allowed within an 128 km (80 mile) distance of the adjacent channel television station.

(h) Mobile stations shall not operate closer to shore than 6.4 km (4 miles) beyond the three mile limit and shall not operate with an ERP in excess of 100 watts with 9.1 m (30 ft) maximum antenna height.

(i) Mobile stations installed in aircraft shall operate 11 km (7 miles) beyond the three mile limit and shall not operate with an ERP in excess of 1 watt or at heights in excess of 305 m (1000 feet) AMSL.

(j) The following frequency bands are available for assignment in all services for use in the Zones as defined in paragraph (a) of this section.

PAIRED FREQUENCIES (MHZ)

Zone	Transmit (or receive)	Receive (or transmit)
A	490.01875–490.98125	493.01875–493.98125
B	484.01875–484.98125	487.01875–487.98125
C	478.01875–478.98125	481.01875–481.98125

Only the first and last assignable frequencies are shown. Frequencies shall be assigned in pairs with 3 MHz spacing between transmit and receive frequencies. Assignable frequency pairs

will occur in increments of 6.25 kHz. The following frequencies will be assigned for a maximum authorized bandwidth of 6 kHz: 478.01875, 478.98125, 484.01875, 484.98125, 490.01875, 490.98125, 481.01875, 481.98125, 487.01875, 487.98125, 493.01875, and 493.98125.

(k) Fixed stations operating point-to-point shall be assigned frequencies beginning with 490.025/493.025 MHz (Zone A), 484.025/487.025 MHz (Zone B) and 478.025–481.025 MHz (Zone C) and progressing upwards utilizing available frequencies toward the end of the band. Offshore base/mobile stations shall be assigned frequencies beginning at 490.975/493.975 MHz (Zone A), 484.975/478.975 MHz (Zone B) and 478.975/481.975 MHz (Zone C) and progressing downwards utilizing available frequencies toward the beginning of the band. All frequency assignments are subject to the conditions specified in § 90.173.

[50 FR 12027, Mar. 27, 1985; 50 FR 14389, Apr. 12, 1985, as amended at 58 FR 44959, Aug. 25, 1993; 60 FR 37277, July 19, 1995]

§ 90.317 Fixed ancillary signaling and data transmissions.

(a) Licensees of systems that have exclusive-use status in their respective geographic areas may engage in fixed ancillary signaling and data transmissions, subject to the following requirements:

(1) All such ancillary operations must be on a secondary, non-interference basis to the primary mobile operation of any other licensee.

(2) The output power at the remote site shall not exceed 30 watts.

(3) Any fixed transmitters will not count toward meeting the mobile loading requirements nor be considered in whole or in part as a justification for authorizing additional frequencies in the licensee's mobile system.

(4) Automatic means must be provided to deactivate the remote transmitter in the event the carrier remains on for a period in excess of three minutes.

(5) Operational fixed stations authorized pursuant to the provisions of this paragraph are exempt from the requirements of §§ 90.425 and 90.429.

(6) If the system is licensed on 470–512 MHz conventional frequencies, and exclusivity has been achieved through

the aggregate loading of more than a single co-channel licensee, then a licensee must obtain the concurrence of other co-channel licensees prior to commencing such ancillary operations.

(b) Licensees of systems that do not have exclusive-use status in their respective geographic areas may conduct fixed ancillary signaling and data transmissions only in accordance with the provisions of § 90.235 of this part.

[57 FR 34693, Aug. 6, 1992]

Subpart M—Transportation Infrastructure Radio Service

SOURCE: 60 FR 15253, Mar. 23, 1995, unless otherwise noted.

§ 90.350 Scope.

The Transportation Infrastructure Radio Service is for the purpose of integrating radio-based technologies into the nation's transportation infrastructure and to develop and implement the nation's intelligent transportation systems. It includes the Location and Monitoring Service (LMS). Rules as to eligibility for licensing, frequencies available, and any special requirements for services in the Transportation Infrastructure Radio Service are set forth in this subpart.

§ 90.351 Location and Monitoring Service.

These provisions authorize the licensing of systems in the Location and Monitoring Service (LMS). LMS systems utilize non-voice radio techniques to determine the location and status of mobile radio units. LMS licensees authorized to operate a system in the 902-928 MHz band may serve individuals, federal government agencies, and entities eligible for licensing in this part 90.

(a) Each application to license an LMS system shall include the following supplemental information:

(1) A detailed description of the manner in which the system will operate, including a map or diagram.

(2) The necessary or occupied bandwidth of emission, whichever is greater.

(3) The data transmission characteristics as follows:

(i) The vehicle location update rates;

(ii) Specific transmitter modulation techniques used;

(iii) For codes and timing scheme: A table of bit sequences and their alphanumeric or indicator equivalents, and a statement of bit rise time, bit transmission rates, bit duration, and interval between bits;

(iv) A statement of amplitude-versus-time of the interrogation and reply formats, and an example of a typical message transmission and any synchronizing pulses utilized.

(4) A plan to show the implementation schedule during the initial license term.

(b) LMS stations are exempted from the identification requirements of § 90.425; however, the Commission may impose automatic station identification requirements when determined to be necessary for monitoring and enforcement purposes.

§ 90.353 LMS operations in the 902-928 MHz band.

LMS systems may be authorized within the 902-928 MHz band, subject to the conditions in this section. LMS licensees are required to maintain whatever records are necessary to demonstrate compliance with these provisions and must make these records available to the Commission upon request:

(a) LMS operations will not cause interference to and must tolerate interference from industrial, scientific, and medical (ISM) devices and radio-location Government stations that operate in the 902-928 MHz band.

(b) LMS systems are authorized to transmit status and instructional messages, either voice or non-voice, so long as they are related to the location or monitoring functions of the system.

(c) LMS systems may utilize store and forward interconnection, where either transmissions from a vehicle or object being monitored are stored by the LMS provider for later transmission over the public switched network (PSN), or transmissions received by the LMS provider from the PSN are stored for later transmission to the vehicle or object being monitored. Real-time interconnection between vehicles or objects being monitored and the

PSN will only be permitted to enable emergency communications related to a vehicle or a passenger in a vehicle. Such real-time, interconnected communications may only be sent to or received from a system dispatch point or entities eligible in the Public Safety or Special Emergency Radio Services. See subparts B and C of this part.

(d) Multilateration LMS systems will be authorized on a primary basis within the bands 904–909.75 MHz and 921.75–927.25 MHz. Additionally, multilateration and non-multilateration systems will share the 919.75–921.75 MHz band on a co-equal basis. Licensing will be on the basis of Major Trading Area (MTA) service areas for multilateration systems, with one exclusive MTA license being issued for each of these three sub-bands. Except as provided in paragraph (f) of this section, multilateration MTA licensees may be authorized to operate on only one of the three multilateration bands within a given MTA. Additionally, MTA multilateration LMS licenses will be conditioned upon the licensee's ability to demonstrate through actual field tests that their systems do not cause unacceptable levels of interference to 47 CFR part 15 devices.

(e) Multilateration MTA-licensed systems and grandfathered AVM systems (see §90.363) are authorized on a shared basis and must cooperate in the selection and use of frequencies in accordance with §90.173(b).

(f) Multilateration MTA licensees may be authorized to operate on both the 919.75–921.75 MHz and 921.75–927.25 MHz bands within a given MTA (see §90.209(b)(10)).

(g) Multilateration LMS systems whose primary operations involve the provision of vehicle location services, may provide non-vehicular location services.

(h) Non-multilateration stations are authorized to operate on a shared, non-exclusive basis in the 902–904 MHz and 909.75–921.75 MHz sub-bands. Non-multilateration systems and multilateration systems will share the 919.75–921.75 MHz band on a co-equal basis. Non-multilateration LMS systems may not provide non-vehicular location services. The maximum antenna height above ground for non-

multilateration LMS systems is 15 meters.

§90.355 LMS operations below 512 MHz.

Applications requiring not more than 25 kHz bandwidth per frequency in the 25–50 MHz, 150–170 MHz, and 450–512 MHz bands may use either base-mobile frequencies currently assigned the applicant, or be assigned base-mobile frequencies available in the service in which eligibility has been established, provided that:

(a) For transmission between vehicles and base stations, each frequency in a single-frequency mode of operation will provide location data for approximately 200 vehicles, or both frequencies in a two-frequency mode of operation will provide location data for approximately 400 vehicles, except that for frequencies in the 450–512 MHz band that are assigned in pairs in accordance with the allocation plan for the band, the requirement is that location data be provided for approximately 200 vehicles for each frequency pair; and a showing is made that 50 percent of the vehicles will be in operation within the system by the end of the second year of the initial license term, and 70 percent will be in operation within the system by the end of the initial license term; except that if these vehicle loading standards will not be met, frequencies will be assigned only on a secondary non-interference basis to any authorized radiotelephony operation.

(b) The minimum separation between a proposed LMS station and the nearest co-channel base station of another licensee operating a voice system is 75 miles (120 km) for a single frequency mode of operation or 35 miles (56 km) for a two-frequency mode of operation. Where the minimum mileage separation cannot be achieved, agreement to the use of F1D, F2D, G1D, G2D or P0N emission must be received from all existing co-channel licensees using voice emissions within the applicable mileage limits. If there is interference with voice operations and required agreement was not received, or operation was authorized on a secondary non-interference basis, the licensee of the LMS system is responsible for eliminating the interference.

(c) Frequencies additional to any assigned under paragraph (a) of this section will not be assigned to the same licensee at any stations located within 64 km (40 miles) of any station in which the licensee holds an interest until each of such licensee's frequencies for LMS operation is shown to accommodate not less than 90 percent of the frequency loading requirements specified in paragraph (a) of this section.

§90.357 Frequencies for LMS systems in the 902–928 MHz band.

(a) Multilateration LMS systems will be authorized on the following LMS sub-bands:

LMS Sub-band	Forward Link ¹
904.000–909.750 MHz	927.750–928.000 MHz.
919.750–921.750 MHz ²	927.500–927.750 MHz.
921.750–927.250 MHz	927.250–927.500 MHz.

¹Forward links for LMS systems may also be contained within the LMS sub-band. However, the maximum allowable power in these sub-bands is 30 watts ERP in accordance with § 90.205(j).

²The frequency band 919.750–921.750 MHz is shared co-equally between multilateration and non-multilateration LMS systems.

(b) Non-multilateration LMS systems will be authorized on the following frequency bands:

LMS Sub-band¹

902.000–904.000 MHz
909.750–921.750 MHz

¹Applicants for non-multilateration LMS systems should request only the minimum amount of bandwidth necessary to meet their operational needs.

[60 FR 15253, Mar. 23, 1995, as amended at 60 FR 37277, July 19, 1995]

§90.359 Field strength limits for MTA-licensed LMS systems.

MTA-licensed multilateration systems shall limit the field strength of signals transmitted from their base stations to 47 dBuV/m at their MTA boundary.

§90.361 Interference from part 15 and Amateur operations.

Operations authorized under parts 15 and 97 of this chapter may not cause harmful interference to LMS systems in the 902–928 MHz band. These operations will not be considered to be causing harmful interference to a multilateration LMS system operating in one of the three MTA sub-bands (see

§90.357(a)) if they operate in accordance with the provisions of parts 15 or 97 of this chapter and at least one of the following conditions are met:

(a) It is a field disturbance sensor operating under §15.245 of this chapter and it is not operating in the 904–909.750 or 919.750–928.000 MHz sub-bands; or

(b) It does not employ an outdoor antenna; or

(c) If it does employ an outdoor antenna, then if:

(1) The directional gain of the antenna does not exceed 6 dBi, or if the directional gain of the antenna exceeds 6 dBi, it reduces its transmitter output power below 1 watt by the proportional amount that the directional gain of the antenna exceeds 6 dBi; and

(2) Either:

(i) The antenna is 5 meters or less in height above ground; or

(ii) The antenna is more than 5 meters in height above ground but less than or equal to 15 meters in height above ground and either:

(A) Adjusts its transmitter output power below 1 watt by 20 log (h/5) dB, where h is the height above ground of the antenna in meters; or

(B) Is providing the final link for communications of entities eligible under subpart B or C of this part 90.

§90.363 Grandfathering provisions for existing AVM licensees.

(a) These provisions authorize grandfathered operation by automatic vehicle monitoring (AVM) systems licensed on or before February 3, 1995. To attain grandfathered status for their stations, existing multilateration AVM licensees must file, on or before May 22, 1995, applications to modify their station licenses to comply with the band plan shown in §90.357(a). These applications to modify must identify the multilateration sub-band or sub-bands in which the applicants intend to operate their LMS system stations, once their applications to modify have been authorized. The application to modify a license to comply with the band plan shown in §90.357(a) may also include a modification to specify an alternate site, so long as the alternate site is 2 kilometers or less from the site specified in the original license.

(b) When existing multilateration AVM licensees file applications to modify, as specified in paragraph (a) of this section, they *must* certify that either:

(1) The stations that compose their AVM system were constructed and placed in operation in accordance with § 90.155(e) on or before February 3, 1995; or

(2) The stations were not constructed and placed in operation in accordance with § 90.155(e) on or before February 3, 1995.

(c) Multilateration AVM systems that were constructed and placed in operation on or before February 3, 1995 will be given until April 1, 1998 to convert to the spectrum identified in their LMS system license. Such licensees may continue to operate their systems during this period. Licensees of multilateration AVM constructed and operational systems that do not file applications to modify on or before May 22, 1995, will be permitted to continue operations under the provisions of former § 90.239 until April 1, 1998 or the end of their original license term, whichever occurs first, at which time such licenses will cancel automatically and will not be renewed.

(d) Multilateration AVM licensees for stations that *were not* constructed and placed in operation on or before February 3, 1995 must construct their LMS systems and place them in operation on the spectrum identified in their LMS system license on or before September 1, 1996, or their licenses will cancel automatically (see Section 90.155 (e)). Also, these licenses will cancel automatically on July 1, 1996 unless timely modification applications are filed on or before this date (see paragraph (a) of this section).

(e) Non-multilateration systems licensed in spectrum other than the 902.00–904.00 and 909.75–921.75 MHz bands must modify their licenses by April 1, 1998 to specify operation solely in the bands provided in § 90.357(b) for non-multilateration systems and to operate their systems consistently with the provisions of § 90.353.

[60 FR 15253, Mar. 23, 1995, as amended at 61 FR 18986, Apr. 30, 1996]

Subpart N—Operating Requirements

§ 90.401 Scope.

The subpart prescribes general operating requirements for stations licensed under this part. This includes station operating procedures, points of communication, permissible communications, methods of station identification, control requirements, and station record keeping requirements.

§ 90.403 General operating requirements.

(a) Licensees of radio stations in the private land mobile radio services shall be directly responsible for the proper operation and use of each transmitter for which they are licensed. In this connection, licensees shall exercise such direction and control as is necessary to assure that all authorized facilities are employed:

(1) Only for permissible purposes;

(2) Only in a permissible manner; and

(3) Only by persons with authority to use and operate such equipment.

(b) In carrying out their responsibilities under § 90.403(a), licensees shall be bound by the provisions of the Communications Act of 1934, as amended, and by the rules and regulations of the Commission governing the radio service in which their facilities are licensed; and licensees may not, through written or oral agreements or otherwise, relieve themselves of any duty or obligation imposed upon them, by law, as licensees.

(c) Except for stations that have been granted exclusive channels under this part and that are classified as commercial mobile radio service providers pursuant to part 20 of this chapter, each licensee must restrict all transmissions to the minimum practical transmission time and must employ an efficient operating procedure designed to maximize the utilization of the spectrum.

(d) Communications involving the imminent safety-of-life or property are to be afforded priority by all licensees.

(e) Licensees shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other

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measures as may be necessary to minimize the potential for causing interference.

(f) Stations licensed in this part shall not continuously radiate an unmodulated carrier except where required for tests as permitted in §90.405, except where specifically permitted by this part, where specifically authorized in the station authorization, or on an as needed basis in the Radiolocation Radio Service.

(g) The radiations of the transmitter shall be suspended immediately upon detection or notification of a deviation from the technical requirements of the station authorization and until such deviation is corrected. For transmissions concerning the imminent safety-of-life or property, the transmissions shall be suspended as soon as the emergency is terminated.

[43 FR 54791, Nov. 22, 1978; 44 FR 32220, June 5, 1979, as amended at 59 FR 59965, Nov. 21, 1994]

§90.405 Permissible communications.

(a) Stations licensed under this part may transmit only the following types of communication:

(1) Any communication related directly to the imminent safety-of-life or property;

(2) Communications directly related and necessary to those activities which make the licensee eligible for the station license held under this part. In addition, when communication service is provided under the cooperative sharing provisions of §90.179, the licensee providing such service may transmit communications related to the activities for which the parties receiving the service would be eligible to be licensed.

(3) Communications for testing purposes required for proper station and system maintenance. However, each licensee shall keep such tests to a minimum and shall employ every measure to avoid harmful interference.

(b) The provisions contained in paragraph (a) of this section do not apply where a single base station licensee has been authorized to use a channel above 470 MHz on an exclusive basis, or to stations licensed under this part that

are classified as CMRS providers under part 20 of this chapter.

[50 FR 6182, Feb. 14, 1985, as amended at 59 FR 59965, Nov. 21, 1994]

§90.407 Emergency communications.

The licensee of any station authorized under this part may, during a period of emergency in which the normal communication facilities are disrupted as a result of hurricane, flood, earthquake or similar disaster, utilize such station for emergency communications in a manner other than that specified in the station authorization or in the rules and regulations governing the operation of such stations. The Commission may at any time order the discontinuance of such special use of the authorized facilities.

[49 FR 36376, Sept. 17, 1984]

§90.411 Civil defense communications.

The licensee of any station authorized under this part may, on a voluntary basis, transmit communications necessary for the implementation of civil defense activities assigned such station by local civil defense authorities during an actual or simulated emergency, including drills and tests. The Commission may at any time order the discontinuance of such special use of the authorized facilities.

[49 FR 36376, Sept. 17, 1984]

§90.415 Prohibited uses.

Stations licensed under this part shall not:

(a) Transmit program material of any kind for use in connection with broadcasting; or

(b) Render a communications common carrier service, except for stations in the Public Safety Pool providing communications standby facilities under §90.20(a)(2)(xi) and stations licensed under this part in the SMR, private carrier paging, Industrial/Business Pool, or 220-222 MHz services.

[43 FR 54791, Nov. 22, 1978, as amended at 59 FR 59965, Nov. 21, 1994; 62 FR 18933, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18933, Apr. 17, 1997, §90.415 was amended by revising paragraph (b), effective Oct. 17, 1997.

§ 90.417 Interstation communication.

(a) Any station licensed under this part may communicate with any other station without restriction as to type, service, or licensee when the communications involved relate directly to the imminent safety-of-life or property.

(b) Any station licensed under this part may communicate with any other station licensed under this part, with U.S. Government stations, and with foreign stations, in connection with mutual activities, provided that where the communication involves foreign stations prior approval of the Commission must be obtained, and such communication must be permitted by the government that authorizes the foreign station. Communications by Public Safety Pool eligibles with foreign stations will be approved only to be conducted in accordance with Article 5 of the Inter-American Radio Agreement, Washington, DC, 1949, the provisions of which are set forth in § 90.20(b).

[43 FR 54791, Nov. 22, 1978, as amended at 62 FR 18933, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18933, Apr. 17, 1997, § 90.417 was amended by revising the last sentence of paragraph (b), effective Oct. 17, 1997.

§ 90.419 Points of communication.

Normally, operations licensed under this part are intended to provide intrastation mobile communications. For example, a base station is intended to communicate with its associated mobile stations and mobile stations are intended to communicate between associated mobile stations and associated base stations of the licensee. Accordingly, operations between base stations at fixed locations are permitted only in the following situations:

(a) Base stations licensed under subpart T of this part and those in the Public Safety Pool that operate on frequencies below 450 MHz, may communicate on a secondary basis with other base stations, operational fixed stations, or fixed receivers authorized in these services or pools.

(b) Base stations licensed on any frequency in the Industrial/Business Pool and on base stations frequencies above 450 MHz in the Public Safety Pool may

communicate on a secondary basis with other base stations, operational fixed stations, or fixed receivers authorized in these pools only when:

(1) The messages to be transmitted are of immediate importance to mobile stations; or

(2) Wireline communications facilities between such points are inoperative, economically impracticable, or unavailable from communications common carrier sources. Temporary unavailability due to a busy wireline circuit is not considered to be within the provisions of this paragraph.

(c) Operational fixed stations may communicate with units of associated mobile stations only on a secondary basis.

(d) Operational fixed stations licensed in the Industrial/Business Pool may communicate on a secondary basis with associated base stations licensed in these services when:

(1) The messages to be transmitted are of immediate importance to mobile stations; or

(2) Wireline communications facilities between such points are inoperative, economically impracticable, or unavailable from communications common carrier sources. Temporary unavailability due to a busy wireline circuit is not considered to be within the provisions of this paragraph.

(e) Travelers' Information Stations are authorized to transmit certain information to members of the traveling public (see § 90.242).

(f) CMRS Licensees in the SMR categories of part 90, subpart S, CMRS providers authorized in the 220 MHz service of part 90, subpart T, CMRS paging operations as defined by part 90, subpart P and for-profit interconnected business radio services with eligibility defined by section 90.75 are permitted to utilize their assigned spectrum for fixed services on a co-primary basis with their mobile operations.

[61 FR 45356, Aug. 29, 1996, as amended at 62 FR 18933, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18933, Apr. 17, 1997, § 90.419 was amended by revising paragraph (a) and the introductory text of paragraphs (b) and (d), effective Oct. 17, 1997.

§ 90.421 Operation of mobile units in vehicles not under the control of the licensee.

Mobile station transmitters may be installed in vehicles operated by persons other than the licensee as provided in the following paragraphs when necessary for the licensee to meet his requirements in connection with the activities for which he is licensed. The number of units so installed, together with units installed in vehicles operated by the licensee, must not exceed the number of mobile units authorized to the licensee. When an insufficient number of units is licensed to cover such additional units, the license must be modified to add a sufficient number of mobile units. The licensee is responsible for taking any necessary precaution to effectively eliminate the possibility of unauthorized operation of transmitters when not under the control of the licensee.

(a) *Public Safety Pool.* (1) Mobile units licensed in the Public Safety Pool may be installed in any vehicle which in an emergency would require cooperation and coordination with the licensee, and in any vehicle used in the performance, under contract, of official activities of the licensee. This provision does not permit the installation of radio units in non-emergency vehicles that are not performing governmental functions under contract but with which the licensee might wish to communicate.

(2) Additionally, units may be installed in the following:

(i) Vehicles of contractors or other persons having a direct responsibility for official highway activities;

(ii) Vehicles of forestry cooperators, and persons having a direct responsibility in the prevention, detection, and suppression of forest fires; and

(iii) Mobile units licensed under § 90.20(a)(2)(iii) may be installed in a vehicle or be hand-carried for use by any person with whom cooperation or coordinations is required for medical services activities.

(b) *Industrial/Business Pool.* Mobile units licensed in the Industrial/Business Pool may be installed in the following:

(1) Vehicles of persons furnishing under contract to the licensee and for the duration of the contract, a facility

or service directly related to the activities of the licensee;

(2) Vehicles operated by an organization or association comprised of interconnected electric utilities forming interconnections, power pools, or groups;

(3) Vehicles of persons furnishing a private emergency road service to its members pursuant to a contract with the association; and

(4) Vehicles operated by organizations providing, under contract, facilities or service in connection with railroad operation or maintenance including pickup, delivery, or transfer between stations of property shipped, continued in, or destined for shipment by railroad common carrier. Parties to the contract must comply with the provisions of § 90.179.

(c) In addition to the above, frequencies assigned to licensees in the Private Land Mobile Radio Services may be installed in the facilities of those who assist the licensee in emergencies and with whom the licensee must communicate in situations involving imminent safety to life or property.

[43 FR 54791, Nov. 22, 1978, as amended at 44 FR 50603, Aug. 29, 1979; 47 FR 19539, May 6, 1982; 47 FR 42751, Sept. 29, 1982; 61 FR 6576, Feb. 21, 1996; 62 FR 18933, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18933, Apr. 17, 1997, § 90.421 was amended by revising paragraphs (a) and (b), removing paragraphs (c) through (k), and redesignating paragraph (l) as paragraph (c), effective Oct. 17, 1997.

§ 90.423 Operation on board aircraft.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, and except as may be provided in other sections of this part with respect to operation on specific frequencies, mobile stations first authorized after September 14, 1973, under this part may be operated aboard aircraft for air-to-mobile, air-to-base, air-to-air and air-to-ship communications subject to the following:

(1) Operations are limited to aircraft that are regularly flown at altitudes below 1.6 km (1 mi) above the earth's surface;

(2) Transmitters are to operate with an output power not to exceed ten watts;

(3) Operations are secondary to land-based systems;

(4) Such other conditions, including additional reductions of altitude and power limitations, as may be required to minimize the interference potential to land-based systems.

(b) Exceptions to the altitude and power limitations set forth in paragraph (a) of this section may be authorized upon a showing of unusual operational requirements which justify departure from those standards, provided that the interference potential to regular land-based operations would not be increased.

(c) Mobile operations aboard aircraft in the services governed by this part, under licenses in effect September 14, 1973, may be continued without regard to provisions of paragraph (a) of this section, as follows:

(1) Operations may be continued only for the balance of the term of such licenses if aircraft involved are regularly flown at altitudes greater than 1.6 km (1 mi) above the earth's surface.

(2) Operations may be continued for one additional renewal license term if the aircraft involved are regularly flown at altitudes below 1.6 km (1 mi) above the earth's surface.

(d) Operation of radiolocation mobile stations may be authorized without regard to limitations and conditions set forth in paragraphs (a), (b), and (c) of this section.

[43 FR 54791, Nov. 22, 1978, as amended at 58 FR 44960, Aug. 25, 1993]

§ 90.425 Station identification.

Stations licensed under this part shall transmit identification in accordance with the following provisions:

(a) *Identification procedure.* Except as provided for in paragraph (d) of this section, each station or system shall be identified by the transmission of the assigned call sign during each transmission or exchange of transmissions, or once each 15 minutes (30 minutes in the Public Safety Pool) during periods of continuous operation. The call sign shall be transmitted by voice in the English language or by International Morse Code in accordance with paragraph (b) of this section. If the station is employing either analog or digital voice scrambling, or non-voice emis-

sion, transmission of the required identification shall be in the unscrambled mode using A3E, F3E or G3E emission, or International Morse, with all encoding disabled. Permissible alternative identification procedures are as follows:

(1) A mobile relay stations call sign may be used to identify the associated control and mobile stations, except in the Public Safety Pool where the stations operate on frequencies below 450 MHz. Alternatively, a base station (including a mobile relay station) which is controlled by radio may be identified by the transmission of the call sign of the station at which communications originate.

(2) One or more fixed relay stations may be identified by the transmission of the call signs of the stations at which the communications originate.

(3) When a mobile station transmits on a different frequency than its associated base station, the assigned call sign of either the mobile station or the base station may be transmitted. Further, a single mobile unit in the licensee's authorized geographic area of operation may transmit station identification on behalf of any other operating mobile units in the fleet.

(4) *Use of an identifier other than the assigned call sign.* (i) In the Public Safety Pool, mobile units licensed to a governmental entity and which operate on frequencies above 30 MHz may use an identifier which contains, at a minimum, the name of the licensee if the licensee maintains at the station a list of the special identifiers to be used by the mobile units.

(ii) In the Industrial/Business Pool, licensees may request the Commission's local Engineer-in-Charge to approve the use of special mobile unit identifiers in lieu of the assigned call sign. Such requests, however, will not be granted where it appears that harmful interference to international operations may be caused by stations below 50 MHz, or by stations operating in areas within 80 km (50 miles) of an international boundary, or where it appears that the proposed method of identification will not adequately distinguish the mobile units of the applicant from the mobile units of other licensees in the area.

(iii) In the Industrial/Business Pool, railroad licensees (as defined in §90.7) may identify stations by the name of the railroad and the train number, caboose number, engine number, or the name of the fixed wayside station. If none of these forms are practicable, any similar name or number may be designated by the railroad concerned for use by its employees in the identification of fixed points or mobile units; *Provided, That*, a list of such identifiers is maintained by the railroad. An abbreviated name or the initials of the railroad may be used where such are in general usage. In those areas where it is shown that no difficulty would be encountered in identifying the transmission of a particular station (as, for example, where stations of one licensee are located in a yard isolated from other radio installations), approval may be given to a request from the licensee for permission to omit the station identification.

(5) *Use of identifiers in addition to assigned call signs.* Nothing in this section shall be construed as prohibiting the transmission of station or unit identifiers which may be necessary or desirable for system operation, *Provided, That*, they are transmitted in addition to the assigned station call sign or other permissible form of identification.

(b) *Use of automatic Morse code identification equipment.* Automatically activated equipment may be used to transmit station identification in International Morse Code pursuant to the following conditions:

(1) The signal output of the automatic identification equipment shall be connected to the transmitter at the microphone input or any other manufacturer-provided signal input terminal and shall be adjusted to produce 40 percent \pm 10 percent of the maximum permissible modulation or deviation level. This adjustment shall be performed when all other modulating signals are absent.

(2) The Morse code transmission rate shall be maintained between 20 and 25 words per minute.

(3) The frequency of the keyed tone comprising the identification signal shall be 1200 ± 800 Hz. A licensee may be required to change the frequency in

order to prevent interference to the operations of another co-channel licensee.

(4) Should activation of automatic Morse code identification equipment interrupt the communications of another co-channel licensee, the Commission may require the use of equipment which will delay automatic station identification until such co-channel communications are completed.

(c) *Special provisions for identification in the Radiolocation Service.* (1) Stations in the Radiolocation Service are not required to identify except upon specific instruction from the Commission or as required by paragraph (c)(2) of this section.

(2) Stations in the Radiolocation Service operating on frequencies above 3400 kHz that employ spread spectrum techniques shall transmit a two-letter manufacturer's designator, authorized by the Commission on the station authorization, at the beginning and ending of each transmission and once every 15 minutes during periods of continuing operation. The designator shall be transmitted in International Morse Code at a speed not exceeding 25 words per minute, and the spread spectrum mode of operation shall be maintained while the designator is being transmitted. The identifying signal shall be clearly receivable in the demodulated audio of a narrow-band FM receiver.

(d) *General exemptions.* A station need not transmit identification if:

(1) It is a mobile station operating on the transmitting frequency of the associated base station.

(2) It is a mobile station in the Public Safety Pool using F1E or G1E emission.

(3) It is transmitting for telemetering purposes or for the activation of devices which are employed solely as a means of attracting attention, or for remote control purposes, or which is retransmitting by self-actuating means, a radio signal received from another radio station or stations.

(4) It is any type of radiopositioning or radar station authorized in a service other than the Radiolocation Service.

(5) It is used solely for automatic vehicle monitoring or location.

(6) It is a paging station authorized in accordance with the provisions of §90.20(a)(2)(v).

(7) It is a mobile station employing non-voice emissions and the associated base station identifies on behalf of the mobile unit(s).

(8) It is a base or mobile station in the 220–222 MHz band authorized to operate on a nationwide basis in accordance with subpart T of this part.

(9) It is a wireless microphone station operating in accordance with the provisions of § 90.265(b).

(e) Special provisions for stations licensed under this part that are classified as CMRS providers under part 20 of this chapter.

(1) Station identification will not be required for 929–930 MHz nationwide paging licensees and MTA-based SMR licensees. All other CMRS stations will be required to comply with the station identification requirements of paragraphs (a) through (d) of this section.

(2) CMRS stations subject to a station identification requirement will be permitted to use a single call sign for commonly owned facilities that are operated as part of a single system. The call sign must be transmitted each hour within five minutes of the hour, or upon completion of the first transmission after the hour.

(3) CMRS stations granted exclusive channels may transmit their call signs digitally. The station licensee must provide the Commission with information sufficient to decode the digital transmission to ascertain the transmitted call sign.

[43 FR 54791, Nov. 22, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 90.425, see the List of CFR Sections Affected in the Finding Aids section of this volume.

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, § 90.425 was amended by revising the first sentence of the introductory text of paragraph (a), the first sentences of paragraphs (a)(1), (a)(4)(ii), and (a)(4)(iii), and paragraphs (a)(4)(i), (d)(2), and (d)(6), effective Oct. 17, 1997.

§ 90.427 Precautions against unauthorized operation.

(a) Each transmitter shall be so installed and protected that it is not accessible to or capable of operation by persons other than those duly authorized by and under the control of the licensee. Provisions of this part author-

izing certain unlicensed persons to operate stations, or authorizing unattended operation of stations in certain circumstances, shall not be construed to change or diminish in any respect the responsibility of station licensees to maintain control over the stations licensed to them (including all transmitter units thereof), or for the proper functioning and operation of those stations and transmitter units in accordance with the terms of the licenses of those stations.

(b) Except for frequencies used in accordance with § 90.417, no person shall program into a transmitter frequencies for which the licensee using the transmitter is not authorized.

[43 FR 54791, Nov. 22, 1978, as amended at 52 FR 47570, Dec. 15, 1987]

§ 90.429 Control point and dispatch point requirements.

(a) *Control point required.* Unless permitted to be operated on an unattended basis, each station shall be provided with a control point;

(b) A control point is an operating position:

(1) Which must be under the control and supervision of the licensee;

(2) Where a person immediately responsible for the operation of the transmitter is stationed;

(3) Where the monitoring facilities required by this part are installed.

(c) *Control point location.* The location of the control point will be specified in the station license and will be assumed to be the same as that of the transmitting equipment unless an application for a different location has been approved by the Commission.

(d) *Control point facilities required.* At each control point, the following facilities shall be installed:

(1) A carrier-operated device which will provide continuous visual indication when the transmitter is radiating, or, a pilot lamp or meter which will provide continuous visual indication when the transmitter circuits have been placed in a condition to produce radiation. The provisions of this subparagraph shall not apply to hand-carried transmitters or transmitters installed on motorcycles. The control point for a transmitter utilized to activate another radio station may employ

a single pilot lamp or meter as an indication of the activation of local and remote transmitters.

(2) Facilities which will permit the person responsible for the operation of the transmitter either to disconnect the dispatch point circuits from the transmitter or to render the transmitter inoperative from any dispatch point under his supervision; and

(3) Facilities which will permit the person responsible for the operation of the transmitter to turn the transmitter carrier on and off at will.

(e) *Dispatch point.* A dispatch point is any position from which messages may be transmitted under the supervision of the person at a control point who is responsible for the operation of the transmitter. Dispatch points may be installed without authorization from the Commission.

[43 FR 54791, Nov. 22, 1978; 44 FR 67118, Nov. 23, 1979, as amended at 48 FR 29517, June 27, 1983]

§ 90.431 Unattended operation.

No person is required to be in attendance at a station when transmitting during normal rendition of service and when either:

(a) Transmitting for telemetering purposes; or,

(b) Retransmitting by self-actuating means a radio signal received from another radio station or stations.

§ 90.433 Operator requirements.

(a) No operator license or permit is required for the operation, maintenance, or repair of stations licensed under this part.

(b) Any person, with the consent or authorization of the licensee, may employ stations in this service for the purpose of telecommunications.

(c) The station licensee shall be responsible for the proper operation of the station at all times and is expected to provide observations, servicing and maintenance as often as may be necessary to ensure proper operation. All adjustments or tests during or coincident with the installation, servicing, or maintenance of the station should be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter installation, oper-

ation, maintenance, and repair duties in the private land mobile services and fixed services by an organization or committee representative of users in those services.

(d) The provisions of paragraph (b) of this section shall not be construed to change or diminish in any respect the responsibility of station licensees to have and to maintain control over the stations licensed to them (including all transmitter units thereof), or for the proper functioning and operation of those stations (including all transmitter units thereof), in accordance with the terms of the licenses of those stations.

(Secs. 4(i) and 303(r), Communications Act of 1934, as amended, 47 U.S.C. 154(i) and 303(r), and sec. 553 of the Administrative Procedures Act, 5 U.S.C. 553)

[49 FR 20672, May 16, 1984]

§ 90.437 Posting station licenses.

(a) The current original authorization for each station shall be retained as a permanent part of the station records but need not be posted.

(b) Entities authorized under this part must make available either a clearly legible photocopy of the authorization for each base or fixed station at a fixed location at every control point of the station or an address or location where the current authorization may be found.

(c) Entities operating under a temporary permit authorized in accordance with § 90.159 shall post an executed copy of the Form 572 at every control point of the system or an address or location where the current executed copy may be found.

(d) An applicant operating under a temporary permit authorized in accordance with § 90.657 must retain an executed copy of FCC Form 572 as a permanent part of the station records.

[43 FR 54791, Nov. 22, 1978, as amended at 45 FR 59884, Sept. 11, 1980; 47 FR 41045, Sept. 16, 1982; 47 FR 51883, Nov. 18, 1982; 54 FR 4030, Jan. 27, 1989; 59 FR 59965, Nov. 21, 1994]

§ 90.439 Inspection of stations.

All stations and records of stations in these services shall be made available for inspection at any reasonable time and any time while the station is

§ 90.441

in operation upon reasonable request of an authorized representative of the Commission.

§ 90.441 Inspection and maintenance of antenna structure marking and associated control equipment.

The owner of each antenna structure required to be painted and/or illuminated under the provisions of Section 303(q) of the Communications Act of 1934, as amended, shall operate and maintain the antenna structure painting and lighting in accordance with part 17 of this chapter. In the event of default by the owner, each licensee or permittee shall be individually responsible for conforming to the requirements pertaining to antenna structure painting and lighting.

[61 FR 4369, Feb. 6, 1996]

§ 90.443 Content of station records.

Each licensee of a station in these services shall maintain records in accordance with the following:

(a) For all stations, the results and dates of the transmitting measurements required by § 90.215 of this part and the name of the person or persons making the measurements.

(b) For all stations, the dates and pertinent details of any maintenance performed on station equipment, and the name and address of the service technician who did the work. If all maintenance is performed by the same technician or service company, the name and address need be entered only once in the station records.

(c) For private land stations that are interconnected with the public switched telephone network, the licensee must maintain a detailed description of how interconnection is accomplished. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangement must maintain cost sharing records. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing and the Commission upon request. See § 90.477.

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(d) For shared land stations, the records required by § 90.179.

[43 FR 54791, Nov. 22, 1978, as amended at 48 FR 26621, June 9, 1983; 48 FR 29518, June 27, 1983; 50 FR 39681, Sept. 30, 1985; 50 FR 40976, Oct. 8, 1985; 61 FR 4369, Feb. 6, 1996]

§ 90.445 Form of station records.

(a) Station records shall be kept in an orderly manner, and in such detail that the data required are readily available. Key letters or abbreviations may be used if proper meaning or explanation is set forth in the record.

(b) Each entry in the records of each station shall be signed by a person qualified to do so, having actual knowledge of the facts to be recorded.

(c) No record or portion thereof shall be erased, obliterated, or wilfully destroyed within the required retention period. Any necessary correction may be made only by the person originating the entry, who shall strike out the erroneous portion, initial the correction made, and indicate the date of correction.

§ 90.447 Retention of station records.

Records required by this part shall be retained by the licensee for at least one year.

§ 90.449 Answers to official communications and notices of violation.

(a) Licensees are required to respond to official communications with reasonable dispatch and according to the tenor of the communication. Failure to do so may be considered by the Commission to reflect adversely on a person's qualifications to hold Commission authorizations and may also create liabilities for other sanctions.

(b) Any licensee receiving official notice of a violation of the terms of the Communications Act of 1934, as amended, any legislative act or treaty to which the United States is a party, or the rules and regulations of the Commission, shall, within ten (10) days from such receipt or such other period as may be specified by the Commission, send a written answer to the office of the Commission originating the original notice. If an answer cannot be sent, or an acknowledgement made, within

such period, acknowledgement and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay. The answer to each notice shall be complete in itself and shall not be abbreviated by reference to other communications or answers to other notices. The reply shall set forth the steps taken to prevent a recurrence of improper operation.

[59 FR 59965, Nov. 21, 1994]

Subpart O—Transmitter Control

§ 90.460 Scope.

This subpart sets forth the provisions relating to permissible methods of transmitter control and interconnection (see the definition in § 90.7) of radio systems authorized under this part.

[44 FR 67124, Nov. 23, 1979, as amended at 62 FR 18934, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, § 90.460 was amended by removing the last two sentences, effective Oct. 17, 1997.

§ 90.461 Direct and remote control of transmitters.

(a) *In general.* Radio transmitters may be operated and controlled directly (as when the operating position for the transmitter and the transmitter being operated are at the same location), or remotely (as when the transmitter being operated and the position from which it is being operated are at different locations).

(b) *Control of transmitters at remote locations.* Radio transmitters at remote locations may be operated and controlled through the use of wire line or radio links; or through dial-up circuits, as provided in paragraph (c) of this section. Such control links or circuits may be either those of the licensee or they may be provided by common carriers authorized by law to furnish such service.

(c) *Dial-up circuits.* Dial-up circuits may be provided by wire line telephone companies under appropriate tariffs, and they may be used by licensees for purposes of transmitter control, provided:

(1) The dial-up circuits serve only to link licensed transmitter control

points and the transmitters being controlled.

(2) The dial-up circuits are so designed that the transmitters being controlled cannot be operated from any fixed position other than the licensed control points for those transmitters.

(3) Equipment used to provide the transmitter/dial-up-circuit interface is designed to preclude associated mobile units of the licensee from reaching any point(s) served by the wire line telephone facilities other than the control point(s) of the station(s) controlled.

(4) Any direct electrical connection to the telephone network shall comply with applicable tariffs and with part 68 of the Commission's Rules (See § 90.5(j)).

(5) Interconnection, within the meaning of §§ 90.7 and 90.477 through 90.483, may not take place at a control point which connects to its associated transmitter(s) through dial-up circuits; nor may such dial-up transmitter control circuits be used in conjunction with (or shared by) interconnection equipment.

[43 FR 54791, Nov. 22, 1978, as amended at 44 FR 67124, Nov. 23, 1979; 60 FR 50123, Sept. 28, 1995]

§ 90.463 Transmitter control points.

(a) A control operator is required to be stationed at the operating position of a transmitter control point. A control operator is any person designated by the licensee to exercise supervision and control over the operation and use of the licensee's facilities. The control operator may be the licensee; or an employee of the licensee; or the agent of the licensee, appointed by the licensee to act as the control operator; or a third-party contractor, engaged by the licensee to serve as the control operator: *Provided, however,* In no case, through appointment or designation of any person to serve as control operator, may the licensee delegate any of the duties and responsibilities the licensee may have in his capacity as licensee.

(b) Each station or licensed system of communication shall normally have a control point, or control points, at which the control operator or operators are stationed and at or from which the licensee may exercise supervision

and control over the authorized facilities, as required by the provisions of § 90.461. *Provided, however,* Control point requirements may vary from one system to another, depending upon the nature of the radio operation; the way and by whom the facilities are employed; and other factors, as set out in other rule sections under this subpart.

(c) A transmitter control point may be located at a fixed position in a system of communication at or from which the control operator exercises supervision and control over the operation and use of the licensed facilities. Each fixed transmitter control point shall have equipment and facilities to permit the control operator:

(1) To determine when the transmitter or transmitters controlled are either radiating “RF” energy, or when the transmitter circuits have been placed in a condition to produce such radiation. This may be accomplished either through the use of a carrier operated device which provides a visual indication when the transmitter(s) are radiating or a pilot lamp or meter which provides a visual indication when the transmitter circuits have been placed in a condition to produce radiation. Further, where a local transmitter is used to activate a remote transmitter or transmitters in the licensee’s system of communication, a single pilot lamp or meter may be employed to indicate the activation of both the local and the remote transmitter(s).

(2) To turn the carrier of the transmitter on and off at will, or to close the system down completely, when circumstances warrant such action.

(d) The licensee’s transmitting facilities may be operated from dispatch points, the fixed control point shall have equipment to permit the control operator to either disconnect the dispatch point circuits from the transmitter(s) or to render the transmitter(s) inoperative from any dispatch point being supervised.

(e) Where the system is interconnected with public communication facilities, as provided at §§ 90.477 through 90.483, and where those rules so require, the fixed control point shall be equipped to permit the control operator:

(1) To monitor co-channel facilities of other licensees sharing an assigned channel or channels with the licensee in the licensee’s area of operation; and,

(2) To terminate any transmission(s) or communication(s) between points in the public communications system and the private communications system.

(f) In urban areas, the location of fixed transmitter control points will be specified, “same as transmitter,” unless the control point is at a street address which is different from that of the transmitter(s) controlled. In rural areas, the location of fixed control points will be specified, “same as transmitter,” unless the control point is more than 152.5 m (500 ft) from the transmitter(s) controlled. In the latter case, the approximate location of the control point will be specified in distance and direction from the transmitter(s) controlled in terms of distance and geographical quadrant, respectively. It would be assumed that the location of a fixed control point is the same as the location of the transmitter(s) controlled, unless the applicant includes a request for a different location described in appropriate terms as indicated herein.

(g) [Reserved]

(h) Mobile transmitters shall be assumed to be under the immediate control of the mobile operator; provided, however, overall supervision and control of the operation and use of a communication system may be the responsibility of a fixed control point operator. In general, mobile transmitters shall be equipped to permit the operator to determine when they are radiating “RF” energy or when the transmitter circuits have been placed in a condition to produce such radiation. This may be accomplished either through the use of a carrier operated device or of a pilot lamp or meter which will provide a visual indication when the transmitter is radiating or has been placed in a condition to produce radiation provided, however, that hand-carried or pack-carried transmitters and

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transmitters installed on motorcycles need not be so equipped.

[43 FR 54791, Nov. 22, 1978; 44 FR 32220, June 5, 1979; 44 FR 34134, June 14, 1979, as amended at 44 FR 67125, Nov. 23, 1979; 48 FR 29517, June 27, 1983; 54 FR 39740, Sept. 28, 1989; 58 FR 44960, Aug. 25, 1993]

§ 90.465 Control of systems of communication.

(a) Depending on design considerations, control of a system of communication may be exercised in varying ways. In single frequency simplex, base/mobile operations, control may be exercised by the control operator at the fixed control point. In mobile relay systems, where there is an associated control point or control station, control may be exercised by the operator at the control point or control station. In mobile-only systems, control may be exercised by the mobile operator. In communication systems involving multiple base stations or fixed relays control of the system may result from a combination of factors and considerations, including control by a fixed control point operator at some point within the system of communication or control by the mobile station operator of the licensee.

(b) In internal systems, as defined at § 90.7 control may be maintained by conforming the system to the requirements of §§ 90.471 through 90.475.

(c) In interconnected systems, as defined at § 90.7 control may be maintained by conforming operation and system design to that permitted at §§ 90.477 through 90.483.

[43 FR 54791, Nov. 22, 1978, as amended at 54 FR 39740, Sept. 28, 1989]

§ 90.467 Dispatch points.

Dispatch points meeting the requirements of this section need not be specifically authorized; provided, however, that the licensee of any radio station operated from a dispatch point or points shall assume full responsibility for the use and operation of the authorized facilities in compliance with all applicable provisions of law or rule and shall comply with the policy:

(a) A dispatch point may be linked to the transmitter(s) being operated by private or leased wire line of fixed

radio circuits, provided the requirements of § 90.463 are met.

(b) No telephone position in the public, switched, telephone network will be treated as a dispatch point within the meaning or intent of this section.

(c) Operation of transmitting facilities from dispatch points is permitted only when the control operator at a fixed control point in the system is on duty and at no other time.

§ 90.469 Unattended operation.

(a) Subject to the provisions of §§ 90.243, 90.245, and 90.247, mobile relay, fixed relay, and mobile repeater stations are authorized for unattended operation; and the transmitter control point requirements set out at §§ 90.463 through 90.465 shall not apply.

(b) Self-activated transmitters may be authorized for unattended operation where they are activated by either electrical or mechanical devices, provided the licensee adopts reasonable means to guard against malfunctions and harmful interference to other users.

INTERNAL TRANSMITTER CONTROL SYSTEMS

§ 90.471 Points of operation in internal transmitter control systems.

The transmitting facilities of the licensee may be operated from fixed positions located on premises controlled by the licensee. The fixed position may be part of a private telephone exchange or it may be any position in a closed or limited access communications facility intended to be used by employees of the licensee for internal communications and transmitter control purposes. Operating positions in internal transmitter control systems are not synonymous with dispatch points (See § 90.467) nor with telephone positions which are part of the public, switched telephone network; and the scheme of regulation is to be considered and treated as being different. See §§ 90.485 through 90.489.

[44 FR 67125, Nov. 23, 1979]

§ 90.473 Operation of internal transmitter control systems through licensed fixed control points.

An internal transmitter control system may be operated under the control

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and supervision of a control operator stationed at a fixed control point in the system. In such a case, the control point must be equipped to permit the control operator to monitor all traffic to and from fixed positions and mobile stations or paging units of the licensee; and the system shall be so designed to permit the control operator to either disconnect any operating position in the internal system from the transmitter control circuit or to close the system down entirely at will.

[44 FR 67125, Nov. 23, 1979]

§90.475 Operation of internal transmitter control systems in specially equipped systems.

(a) An internal transmitter control system need not be designed to meet the requirements of §90.473 if it meets the following requirements:

(1) All operating positions must be located on premises controlled by the licensee.

(2) An internal transmitter control system may be used in conjunction with other approved methods of transmitter control and interconnection so long as the internal transmitter control system, itself, is neither accessed from telephone positions in the public switched telephone network, nor used dial-up circuits in the public switched telephone network. Licensees with complex communications systems involving fixed systems whose base stations are controlled by such systems may automatically access these base stations through the microwave or operational fixed systems from positions in the PSTN, so long as the base stations and mobile units meet the requirements of §90.483 and if a separate circuit is provided for each mode of transmitter operation (*i.e.*, conventional, dial-up or internal).

(3) The system must be designed so that upon completion of a transmission, the base station transmitter(s) will close down automatically within 3 seconds.

(4) To guard against malfunctions, the system must also be designed so that the base station(s) will be deactivated by an automatic timing device when a modulated signal is not transmitted for a period of three (3) consecutive minutes.

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(5) The system must include automatic monitoring equipment, installed at the base station transmitter site(s), which will prevent the activation of the system when signals of other co-channel stations are present.

(b) [Reserved]

[43 FR 54791, Nov. 22, 1978, as amended at 44 FR 67125, Nov. 23, 1979; 47 FR 17521, Apr. 23, 1982]

INTERCONNECTED SYSTEMS

§90.476 Interconnection of fixed stations and certain mobile stations.

(a) Fixed stations and mobile stations used to provide the functions of fixed stations pursuant to the provisions of §§90.35(c)(11), 90.35(c)(42), and 90.267 are not subject to the interconnection provisions of §§90.477 and 90.483 and may be interconnected with the facilities of common carriers.

(b) Mobile stations used to provide the functions of base and mobile relay stations pursuant to the provisions of §§90.35(c)(11), 90.35(c)(42), and 90.267 are not subject to the provisions of §90.477(d)(3) and may be interconnected with the facilities of common carriers subject to the provisions of §§90.477(d)(1), 90.477(d)(2), 90.477(e), and 90.483.

(c) The provisions of this section do not apply to commercial mobile radio service providers, as defined in part 20 of this chapter.

[50 FR 15152, Apr. 17, 1985, as amended at 59 FR 59965, Nov. 21, 1994; 62 FR 18934, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, §90.476 was amended by revising paragraphs (a) and (b), effective Oct. 17, 1997.

§90.477 Interconnected systems.

(a) Applicants for new land stations to be interconnected with the public switched telephone network must indicate on their applications (class of station code) that their stations will be interconnected. Licensees of land stations that are not interconnected may interconnect their stations with the public switched telephone network only after modifying their license. See

§90.135. In all cases a detailed description of how interconnection is accomplished must be maintained by licensees as part of their station records. See §90.433.

(b) In the frequency ranges 806–824 MHz, 851–869 MHz, 896–901 MHz, and 935–940 MHz, interconnection with the public switched telephone network is authorized under the following conditions:

(1) Interconnected operation is on a secondary basis to dispatch operation. This restriction will not apply to trunked systems or on any channel assigned exclusively to one licensee.

(2) Interconnection may be accomplished at any location through a separate or shared interconnection device. When land stations subject to this part are multiple licensed or shared by authorized users, arrangements for telephone service must be made with a duly authorized carrier by users, licensees, or their authorized agents on a non-profit cost sharing basis. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangement must maintain cost sharing records and the costs must be distributed at least once a year. Licensees, users, or their authorized agents may also make joint use arrangements with a duly authorized carrier and arrange that each licensee or user pay the carrier directly for the licensee's or user's share of the joint use of the shared telephone service. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing and the Commission upon request. In all cases, arrangements with the duly authorized carrier must disclose the number of licensees and users and the nature of the use.

(c) Interconnection of facilities in the Radiolocation Service (subpart F) will not be permitted.

(d) In the frequency ranges below 800 MHz, interconnection with the public switched telephone network is authorized under the following conditions:

(1) Interconnected operation is on a secondary basis to dispatch operation. This restriction will not apply to trunked systems or on any channel assigned exclusively to one licensee.

(2) Interconnection may be accomplished at any location through a separate or shared interconnection device. When land stations subject to this part are multiple licensed or shared by authorized users, arrangements for telephone service must be made with a duly authorized carrier by users, licensees, or their authorized agents on a non-profit cost sharing basis. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangement must maintain cost sharing records and the costs must be distributed at least once a year. Licensees, users, or their authorized agents may also make joint use arrangements with a duly authorized carrier and arrange that each licensee or user pay the carrier directly for the licensee's or user's share of the joint use of the shared telephone service. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing and the Commission upon request. In all cases, arrangements with the duly authorized carrier must disclose the number of licensees and users and the nature of the use.

(3) For licensees in the Industrial/Business Pool and those licensees who establish eligibility pursuant to §90.20(a)(2), except for §§90.20(a)(2)(i) and 90.20(a)(2)(ii) and medical emergency systems in the 450–470 MHz band, interconnection will be permitted only where the base station site or sites proposed stations are located 120 km (75 mi.) or more from the designated centers of the urbanized areas listed below. If these licensees seek to connect within 120 km (75 mi.) of the 25 cities, they must obtain the consent of all co-channel licensees located both within 120 km (75 mi.) of the center of the city; and within 120 km (75 mi.) of the interconnected base station transmitter. The consensual agreements among the co-channel licensees must specifically state the terms agreed upon and a statement must be submitted to the Commission indicating that all co-channel licensees have consented to the use of interconnection. If a licensee has agreed to the use of interconnection on the channel, but later decides against the use of interconnection, the licensee may request that the

co-channel licensees reconsider the use of interconnection. If the licensee is unable to reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed to the use of interconnection and the new licensee does not agree, the new licensee may request that the co-channel licensees reconsider the use of interconnection. If the new licensee can not reach an agreement with co-channel licensees it may request that the Commission reassign it to another channel.

Urbanized area	North latitude	West longitude
New York, NY-northeastern NJ	40°45'06"	73°59'39"
Los Angeles-Long Beach, CA ...	34°03'15"	118°14'28"
Chicago, IL	41°52'28"	87°38'22"
Philadelphia, PA-New Jersey	39°56'58"	75°09'21"
Detroit, MI	42°19'48"	83°02'57"
San Francisco-Oakland, CA	37°46'39"	122°24'40"
Boston, MA	42°21'24"	71°03'25"
Washington, DC-Maryland-Virginia	38°53'51"	77°00'33"
Cleveland, OH	41°29'51"	81°41'50"
St. Louis, MO-Illinois	38°37'45"	90°12'22"
Pittsburgh, PA	40°26'19"	80°00'00"
Minneapolis-St. Paul, MN	44°58'57"	93°15'43"
Houston, TX	29°45'26"	95°21'37"
Baltimore, MD	39°17'26"	76°36'45"
Dallas, TX	32°47'09"	96°47'37"
Milwaukee, WI	43°02'19"	87°54'15"
Seattle-Everett, WA	47°36'32"	122°20'12"
Miami, FL	25°46'37"	80°11'32"
San Diego, CA	32°42'53"	117°09'21"
Atlanta, GA	33°45'10"	84°23'37"
Cincinnati, OH-Kentucky	39°06'07"	84°30'35"
Kansas City, MO-Kansas	39°04'56"	94°35'20"
Buffalo, NY	42°52'52"	78°52'21"
Denver, CO	39°44'58"	104°59'22"
San Jose, CA	37°20'16"	121°53'24"

(e) Additional frequencies shall not be assigned to enable any licensee to employ a preferred interconnection capability.

(f) Paging systems operating on frequencies in the bands below 800 MHz are not subject to the interconnection provisions of § 90.477(d)(3).

[47 FR 17520, Apr. 23, 1982, as amended at 48 FR 29518, June 27, 1983; 50 FR 15152, Apr. 17, 1985; 51 FR 14998, Apr. 22, 1986; 51 FR 37401, Oct. 22, 1986; 52 FR 15501, Apr. 29, 1987; 52 FR 29856, Aug. 12, 1987; 53 FR 1025, Jan. 15, 1988; 58 FR 44961, Aug. 25, 1993; 61 FR 6576, Feb. 21, 1996; 62 FR 18934, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, § 90.477 was amended by revising the first two sentences of paragraph (d)(3), effective Oct. 17, 1997.

§ 90.483 Permissible methods and requirements of interconnecting private and public systems of communications.

Interconnection may be accomplished by commercial mobile service providers licensed under this part by any technically feasible means. Interconnection may be accomplished by private mobile service providers either manually or automatically under the supervision and control of a transmitter control operator at a fixed position in the authorized system of communications or it may be accomplished under the supervision and control of mobile operators, and is subject to the following provisions:

(a) Where a system is interconnected manually at a fixed control point, the control point operator must maintain the capability to turn the carrier of the transmitter off or to de-activate the system completely when circumstances warrant such action.

(b) When the system is interconnected automatically it may be supervised at the control point or in mobile units.

(1) For control point supervision, the following is required:

(i) The control point operator must maintain the capability to turn the carrier of the transmitter off or to de-activate the system completely when circumstances warrant such action.

(ii) When a frequency is shared by more than one system, automatic monitoring equipment must be installed at the base station to prevent activation of the transmitter when signals of co-channel stations are present and activation would interfere with communications in progress. Licensees may operate without the monitoring equipment if they have obtained the consent of all co-channel licensees located within a 120 km (75 mile) radius of the interconnected base station transmitter. A statement must be submitted to the Commission indicating that all co-channel licensees have consented to operate without the monitoring equipment. If a licensee has agreed that the use of monitoring equipment is not necessary, but later decides that the monitoring equipment is necessary, the

licensee may request that the co-channel licensees reconsider the use of monitoring equipment. If the licensee cannot reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed that the use of monitoring equipment is not necessary, and the new licensee does not agree, the new licensee may request the co-channel licensees to reconsider the use of monitoring equipment. If the new licensee cannot reach an agreement with co-channel licensees, it should request a new channel from the Commission. Systems on frequencies above 800 MHz are exempt from this requirement.

(2) For mobile unit supervision, the following is required:

(i) When a frequency is shared by more than one system, automatic monitoring equipment must be installed at each base station to prevent its activation when signals of other co-channel stations are present and activation would interfere with communications in progress. Licensees may operate without this equipment if they have obtained the consent of all co-channel licensees located within a 120 km (75 mile) radius of the interconnected base station transmitter. A statement must be submitted to the Commission indicating that all co-channel licensees have consented to operate without the monitoring equipment. If a licensee has agreed that the use of monitoring equipment is not necessary, but later decides that the monitoring equipment is necessary, the licensee may request that the co-channel licensees reconsider the use of monitoring equipment. If the licensee cannot reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed that the use of monitoring equipment is not necessary, and the new licensee does not agree, the new licensee may request the co-channel licensees to reconsider the use of monitoring equipment. If the new licensee cannot reach an agreement with co-channel license-

ees, it should request a new channel from the Commission. Systems above 800 MHz are exempt from this requirement.

(ii) Initial access from points within the public switched telephone network must be limited to transmission of a 3-second tone, after which time the transmitter shall close down. No additional signals may be transmitted until acknowledgement from a mobile station of the licensee is received. Licensees are exempt from this requirement if they have obtained the consent of all co-channel licensees located within a 120 km (75 mile) radius of the interconnected base station transmitter. However, licensees may choose to set their own time limitations. A statement must be submitted to the Commission indicating that all co-channel licensees have consented to operate without the monitoring equipment. If a licensee has agreed that the use of monitoring equipment is not necessary, but later decides that the monitoring equipment is necessary, the licensee may request that the co-channel licensees reconsider the use of monitoring equipment. If the licensee cannot reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed that the use of monitoring equipment is not necessary, and the new licensee does not agree, the new licensee may request the co-channel licensees to reconsider the use of monitoring equipment. If the new licensee cannot reach an agreement with co-channel licensees, it should request a new channel from the Commission. Systems above 800 MHz are exempt from this requirement.

(c) In single frequency systems, equipment must be installed at the base station which will limit any single transmission from within the public switched telephone network to 30 seconds duration and which in turn will activate the base station receiver to monitor the frequency for a period of not less than three (3) seconds. The mobile station must be capable of terminating the communications during the three (3) seconds. Licensees are exempt

from this requirement if they have obtained the consent of all co-channel licensees located within a 120 km (75 mile) radius of the interconnected base station transmitter. However, licensees may choose to set their own time limitations. A statement must be submitted to the Commission indicating that all co-channel licensees have consented to operate without the monitoring equipment. If a licensee has agreed that the use of monitoring equipment is not necessary, but later decides that the monitoring equipment is necessary, the licensee may request that the co-channel licensees reconsider the use of monitoring equipment. If the licensee cannot reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed that the use of monitoring equipment is not necessary, but the new licensee does not agree, the new licensee may request the co-channel licensees to reconsider the use of monitoring equipment. If the new licensee cannot reach an agreement with co-channel licensees, it should request a new channel from the Commission.

(d) A timer must be installed at the base station transmitter which limits communications to three (3) minutes. After three (3) minutes, the system must close down, with all circuits between the base station and the public switch telephone network disconnected. This provision does not apply to systems which establish eligibility pursuant to §§ 90.20(a)(1)(i), 90.20(a)(1)(ii), and 90.20(a)(2), except §§ 90.20(a)(2)(i) and 90.20(a)(2)(ii), or who are Power, Petroleum, or Railroad licensees (as defined in § 90.7), or to systems above 800 MHz. All systems must be equipped with a timer that closes down the transmitter within three minutes of the last transmission. Licensees may operate without these requirements if they have obtained the consent of all co-channel licensees located within a 120 km (75 mile) radius of the interconnected base station transmitter. However, licensees may choose to set their own time limitations. A statement must be submitted to the Commission indicating that all co-channel licensees have consented to operate without the monitoring equipment. If a licensee has agreed that the use of monitoring equipment is not

necessary, but later decides that the monitoring equipment is necessary, the licensee may request that the co-channel licensees reconsider the use of monitoring equipment. If the licensee cannot reach an agreement with co-channel licensees, the licensee may request that the Commission consider the matter and assign it to another channel. If a new licensee is assigned to a frequency where all the co-channel licensees have agreed that the use of monitoring equipment is not necessary, and the new licensee does not agree, the new licensee may request the co-channel licensees to reconsider the use of monitoring equipment. If the new licensee cannot reach an agreement with co-channel licensees, it should request a new channel from the Commission.

[47 FR 17520, Apr. 23, 1982, as amended at 48 FR 29518, June 27, 1983; 50 FR 15153, Apr. 17, 1985; 58 FR 44961, Aug. 25, 1993; 59 FR 59966, Nov. 21, 1994; 61 FR 6576, Feb. 21, 1996; 62 FR 18934, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, § 90.483 was amended by revising the third sentence of paragraph (d), effective Oct. 17, 1997.

Subpart P—Paging Operations

§ 90.490 One-way paging operations in the private services.

(a) Subject to specific prohibition or restriction by rule provisions governing the radio service in which a licensee's radio system is authorized, paging operations are permitted:

(1) Where the signals and messages are transmitted by a control operator of the licensee stationed at a licensed control point in the licensee's system of communication.

(2) Where the signals and messages are transmitted from an operating position within an internal system of communication which meets the tests of §§ 90.471 through 90.475.

(3) Where the signals and messages are transmitted from a dispatch point within the licensee's system of communication, as defined as § 90.7.

(b) Systems employing dial-up circuits (§ 90.461(c)) may be used in one-way paging operations, but only where the paging signals are transmitted as provided at paragraph (a)(1) of this section.

(c) Paging may be initiated directly from telephone positions in the public switched telephone network. When land stations are multiple licensed or otherwise shared by authorized users, arrangements for the telephone service must be made with a duly authorized carrier by users, licensees, or their authorized agents on a non-profit, cost-shared basis. When telephone service costs are shared, at least one licensee participating in the cost sharing arrangements must maintain cost sharing records and the costs must be distributed at least once a year. Licensees, users, or their authorized agents may also make joint use arrangements with a duly authorized carrier and arrange that each licensee or user pay the carrier directly for the licensee's or user's share of the joint use of the shared telephone service. A report of the cost distribution must be placed in the licensee's station records and made available to participants in the sharing arrangement and the Commission upon request. In all cases, arrangements with the duly authorized carrier must disclose the number of licensees and users and the nature of the use.

[47 FR 39509, Sept. 8, 1982, as amended at 48 FR 56231, Dec. 20, 1983; 52 FR 15501, Apr. 29, 1987]

§ 90.492 One way paging operations in the 806-824/851-869 MHz and 896-901/935-940 MHz bands.

Paging operations are permitted in these bands only in accordance with §§ 90.645(e) and (f).

[54 FR 4030, Jan. 27, 1989]

§ 90.493 Paging operations on exclusive channels in the 929-930 MHz band.

Paging operations on the exclusive channels in the 929-930 MHz band are subject to the rules set forth in this section.

(a) *Exclusive channels.* The center frequencies of the channels in the 929-930 MHz band that may be assigned on an exclusive basis are as follows: 929.0125, 929.1125, 929.1375, 929.1875, 929.2125, 929.2375, 929.2875, 929.3125, 929.3375, 929.3625, 929.3875, 929.4125, 929.4375, 929.4625, 929.4875, 929.5125, 929.5375, 929.5625, 929.5875, 929.6125, 929.6375, 929.6625, 929.6875, 929.7125, 929.7375,

929.7625, 929.7875, 929.8125, 929.8375, 929.8625, 929.8875, 929.9125, 929.9375, 929.9625, and 929.9875 MHz.

(b) *Part 22 licensing, construction and operation rules apply.* Licensing, construction and operation of paging stations on the exclusive channels in the 929-930 MHz band are subject to the application filing, licensing procedure, auction procedure, construction, operation and notification rules and requirements that are set forth in part 22 of this chapter for paging stations operating in the 931-932 MHz band, instead of procedures elsewhere in this part.

(c) *Part 22 power limits apply; type acceptance required.* Paging operations on the exclusive channels in the 929-930 MHz band are subject to the transmitting power limits set forth in part 22 of this chapter for paging stations operating in the 931-932 MHz band, instead of power limits elsewhere in this part. Transmitters used on the exclusive channels in the 929-930 MHz band must be of a type accepted under either part 22 of this chapter or this part (or both).

[62 FR 11636, Mar. 12, 1997]

§ 90.494 Paging operations on shared channels in the 929-930 MHz band.

(a) This section applies to licensing of paging stations on the shared (non-exclusive) channels in the 929-930 MHz band. The center frequencies of these channels are listed in paragraph (b) of this section.

(b) The following frequencies are available to all eligible part 90 users for one-way paging systems on a shared basis only and will not be assigned for the exclusive use of any licensee.

929.0375	929.0875
929.0625	929.1625
	929.2625

(c) All frequencies listed in this section may be used to provide one-way paging communications to persons eligible for licensing under subpart B or C of this part, representatives of Federal Government agencies, individuals, and foreign governments and their representatives. The provisions of § 90.173(b) apply to all frequencies listed in this section.

(d) Licensees on these frequencies may utilize any type of paging operation desired (tone only, tone-voice, digital, tactile, optical readout, etc.).

(e) There shall be no minimum or maximum loading standards for these frequencies.

(f) The effective radiated power for base stations providing paging service on the shared channels must not exceed 3500 watts.

(g) Licenses may be granted on these shared paging channels only for expansion (addition of new sites or relocation of existing sites) or other modification, assignment or transfer of control of existing, licensed private or commercial paging systems, and for new private, internal-use paging systems. Any application for authority to operate a new commercial paging system on any of these shared channels is unacceptable for filing.

[58 FR 62291, Nov. 26, 1993, as amended at 59 FR 59966, Nov. 21, 1994; 61 FR 8483, Mar. 5, 1996; 62 FR 11637, Mar. 12, 1997; 62 FR 18934, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, §90.494 was amended by revising paragraphs (c) and (g), effective Oct. 17, 1997. For the convenience of the user, the superseded text not appearing in the Oct. 1, 1996 revision is set forth as follows:

§90.494 Paging operations on shared channels in the 929–930 MHz band.

* * * * *

(g) Licenses may be granted on these shared paging channels only for expansion (addition of new sites or relocation of existing sites) or other modification, assignment or transfer of control of existing, licensed private (including Special Emergency Radio Service) or commercial paging systems, and for new private (including Special Emergency Radio Service), internal-use paging systems. Any application for authority to operate a new commercial paging system on any of these shared channels is unacceptable for filing.

Subpart Q—Developmental Operation

§90.501 Scope.

This subpart contains the procedures and requirements for the filing of applications for developmental licenses. It includes special requirements relat-

ed to developmental operation, restrictions on operations, and special reports required when the development operation is to seek operational data or techniques directed toward the extension of that service.

§90.503 Eligibility.

Those persons who are eligible to operate stations in services under this part on a regular basis are also eligible to obtain an authorization for developmental operation in those particular radio services.

§90.505 Showing required.

(a) Except as provided in paragraph (b) of this section, each application for developmental operation shall be accompanied by a showing that:

(1) The applicant has an organized plan of development leading to a specific objective;

(2) The actual transmission by radio is essential to proceed beyond the present stage of the program;

(3) The program has reasonable promise of substantial contribution to the expansion or extension of the radio art, or is investigating new unexplored concepts in radio transmission and communications;

(4) The program will be conducted by qualified personnel;

(5) The applicant is legally and financially qualified, and possesses adequate technical facilities to conduct the proposed program; and

(6) The public interest, convenience, and necessity will be served by the proposed operation.

(b) The provisions of paragraph (a) of this section do not apply when an application is made for developmental operation solely for the reason that the frequency requested is restricted to such developmental use.

§90.507 Limitations on use.

Stations used for developmental operation shall conform to all technical and operating requirements of subparts I and N of this part, unless specifically exempted in the instrument of authorization.

§ 90.509 Frequencies available for assignment.

Stations engaged in developmental operation may be authorized to use a frequency or frequencies available in the service in which they propose to operate. The number of channels assigned will depend upon the specific requirements of the developmental program and the number of frequencies available in the particular geographical area where the station is to operate.

§ 90.511 Interference.

The operation of any station engaged in developmental work shall not cause harmful interference to the operation of stations regularly licensed under any part of the Commission's rules.

§ 90.513 Special provisions.

(a) The developmental program as described by the application for authorization shall be followed unless the Commission shall otherwise direct.

(b) Where some phases of the developmental program are not covered by the general rules in this chapter and the rules in this part, the Commission may specify additional requirements or conditions as deemed necessary in the public interest, convenience, or necessity.

(c) The Commission may, from time to time, require a station engaged in developmental work to conduct special tests which are reasonable and desirable to the authorized developmental program.

§ 90.515 Change or cancellation of authorization without hearing.

Every application for authority to engage in developmental operation shall be accompanied by a statement signed by the applicant in which it is agreed that any authorization issued pursuant thereto will be accepted with the express understanding of the applicant that it is subject to change in any of its terms or to cancellation in its entirety at any time, upon reasonable notice but without a hearing, if, in the opinion of the Commission, circumstances should so require.

§ 90.517 Report of operation.

A report on the results of a developmental program shall be filed with and made a part of each application for renewal of authorization. In cases where no renewal is requested, such report shall be filed within 60 days of the expiration of such authorization. Matters which the applicant does not wish to disclose publicly may be so labeled; they will be used solely for the Commission's information, and will not be publicly disclosed without permission of the applicant. The report shall include comprehensive and detailed information on:

- (a) The final objective.
- (b) Results of operation to date.
- (c) Analysis of the results obtained.
- (d) Copies of any published reports.
- (e) Need for continuation of the program.
- (f) Number of hours of operation on each frequency.

This report is not required if the sole reason for the developmental authorization is that the frequency of operation is restricted to developmental use only.

**Subpart R—Frequency List
[Reserved]****Subpart S—Regulations Governing
Licensing and Use of Frequencies in the 806–824, 851–869, 896–901, and 935–940 MHz Bands****§ 90.601 Scope.**

This subpart sets out the regulations governing the licensing and operations of all systems operating in the 806–824/851–869 MHz and 896–901/935–940 MHz bands. It includes eligibility requirements, application procedures, operational, and technical standards for stations licensing in these bands. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflict, the provisions of this subpart shall govern with respect to licensing and operation in these frequency bands.

[56 FR 41469, Aug. 21, 1991]

APPLICATION FOR AUTHORIZATIONS

§ 90.603 Eligibility.

The following persons are eligible for licensing in the 806–824 MHz, 851–869 MHz, 896–901 MHz, and 935–940 MHz Bands.

(a) Any person eligible for licensing under subparts B, C, D, or E of this part.

(b) Any person proposing to provide communications service to any person eligible for licensing under subparts B or C of this part on a not-for-profit, cost-shared basis.

(c) Any person eligible under this part and proposing to provide on a commercial basis base station an ancillary facilities as a Specialized Mobile Radio Service System operator, for the use of individuals, federal government agencies and persons eligible for licensing under subparts B or C of this part.

[47 FR 41032, Sept. 16, 1982, as amended at 53 FR 1025, Jan. 15, 1988; 60 FR 15495, Mar. 24, 1995; 62 FR 18934, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, § 90.603 was amended by revising paragraphs (b) and (c), effective Oct. 17, 1997.

§ 90.605 Forms to be used.

Applications for conventional and trunked radio facilities must be prepared on FCC Forms 574 and 574A and must be submitted or filed in accordance with § 90.127.

[51 FR 14999, Apr. 22, 1986]

§ 90.607 Supplemental information to be furnished by applicants for facilities under this subpart.

(a) Where the applicant is a person proposing to provide service to eligibles under this part on a commercial basis, the applicant must supply:

(1) A statement of the planned mode of operation.

(2) A statement certifying that no person not eligible to use the proposed facility for the purposes for which it is to be authorized will be offered or provided service through the licensee's base station facility.

(b) Except for applicants for SMR licenses, all applicants for conventional radio systems must:

(1) Furnish a list of all radio systems licensed to them or proposed by them

within 64 km. (40 mi.) from the location of the base station transmitter site of the facility for which they have applied.

(2) Specify the number of mobile units to be placed in operation upon grant of the authorization and the number of such units that will be placed in operation within 8 months of the date of grant.

(c) Except for applicants for SMR licenses, all applicants for trunked systems must:

(1) Furnish a list of all radio systems licensed to them within 64 km (40 mi.) from the location of the base station transmitter site of the facility for which they have applied;

(2) Specify the number of vehicular and portable mobile units and control stations to be placed in operation within the term of the license.

(d) Each applicant shall furnish a functional system diagram illustrating the inter-relationship of all stations being applied for, together with technical details including antenna height (AAT), effective radiated power (ERP), the proposed area of coverage, and the signalling methods to be employed.

(e) Except for applicants requesting frequencies in the SMRS category listed in §§ 90.617(d) and 90.619, all applicants for frequencies governed by this subpart must comply with the frequency coordination requirements of § 90.175(b).

[47 FR 41032, Sept. 16, 1982, as amended at 49 FR 36377, Sept. 17, 1984; 51 FR 14999, Apr. 22, 1986; 59 FR 59966, Nov. 21, 1994]

§ 90.609 Special limitations on amendment of applications for assignment or transfer of authorizations for radio systems above 800 MHz.

(a) No application for a conventional or trunked radio system may be amended so as to substitute a new entity except in the following circumstances:

(1) The amendment does not involve a substantial change in the ownership or control of the applicant; or

(2) The changes in the ownership or control of the applicant are involuntary due to the original applicant's insolvency, bankruptcy, incapacity, or death.

(b) A license to operate a conventional or trunked radio system may not be assigned or transferred prior to the completion of construction of the facility. However, the Commission may give its consent to the assignment or transfer of control of such a license prior to the completion of construction where:

(1) The assignment or transfer does not involve a substantial change in ownership or control of the authorized radio facilities; or,

(2) The assignment or transfer is involuntary due to the licensee's insolvency, bankruptcy, incapacity, or death.

(c) Licensees of constructed systems in any category other than Spectrum Block D frequencies in the 800 MHz SMR service (formerly General Category) are permitted to make partial assignments of an authorized grant to an applicant proposing to create a new system or to an existing licensee that has loaded its system to 70 mobiles per channel and is expanding that system. An applicant authorized to expand an existing system or to create a new system with frequencies from any category other than Spectrum Block D frequencies in the 800 MHz SMR service obtained through partial assignment will receive the assignor's existing license expiration date and loading deadline for the frequencies that are assigned. A licensee that makes a partial assignment of a station's frequencies will not be authorized to obtain additional frequencies for that station for a period of one year from the date of the partial assignment.

(d) A constructed system originally licensed in the General Category that is authorized to operate in the conventional mode may be combined with an existing SMR system above 800 MHz authorized to operate in the trunked mode by assignment of an authorized grant of the General Category station to the SMR station.

[47 FR 41032, Sep. 16, 1982, as amended at 55 FR 28029, July 9, 1990; 58 FR 44962, Aug. 25, 1993; 61 FR 6155, Feb. 16, 1996]

POLICIES GOVERNING THE PROCESSING OF APPLICATIONS AND THE SELECTION AND ASSIGNMENT OF FREQUENCIES FOR USE IN THE 806-824 MHz, 851-869 MHz, 896-901 MHz, AND 935-940 MHz BANDS

§ 90.611 Processing of applications.

Applications for facilities to operate on the frequencies governed by this subpart will be processed as follows:

(a) All applications will first be considered to determine whether they are substantially complete and acceptable for filing. If so, except as otherwise specifically provided for in this subpart, they will be assigned a file number and put in pending status. If not, they will be returned to the applicant.

(b) All applications in pending status will be processed in the order in which they are received, determined by the date on which the application was received by the Commission in its Gettysburg, PA office, or the address set forth at § 0.401(b) for applications requiring the fees established in part 1, subpart G of this chapter.

(c) Each application will be reviewed to determine whether it can be granted. Applicants must specify the intended frequency (or frequencies) of operation.

(d) [Reserved]

(e) An application which is dismissed will lose its place in the processing line.

(f) If an application is returned for correction and resubmitted and received by the Commission within 30 days from the date on which it was returned to the applicant, it will retain its place in the processing line. If it is not received within 30 days it will lose its place in the processing line.

[47 FR 41032, Sept. 16, 1982, as amended at 49 FR 36377, Sept. 17, 1984; 53 FR 12156, Apr. 13, 1988; 54 FR 4030, Jan. 27, 1989; 55 FR 28030, July 9, 1990; 56 FR 65859, Dec. 19, 1991; 61 FR 6155, Feb. 16, 1996]

§ 90.613 Frequencies available.

The following table indicates the channel designations of frequencies available for assignment to eligible applicants under this subpart. Frequencies shall be assigned in pairs,

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with mobile and control station transmitting frequencies taken from the 806–824 MHz band with corresponding base station frequencies being 45 MHz higher and taken from the 851–869 MHz band, or with mobile and control station frequencies taken from the 896–901 MHz band with corresponding base station frequencies being 39 MHz higher and taken from the 935–940 MHz band. Only the base station transmitting frequency of each pair is listed in the table.

TABLE OF 806–821/851–866 MHz CHANNEL DESIGNATIONS

Channel No.	Base frequency (MHz)
1	851.0125
2 .....	.0375
3 .....	.0625
4 .....	.0875
5 .....	.1125
6 .....	.1375
7 .....	.1625
8 .....	.1875
9 .....	.2125
10 .....	.2375
11 .....	.2625
12 .....	.2875
13 .....	.3125
14 .....	.3375
15 .....	.3625
16 .....	.3875
17 .....	.4125
18 .....	.4375
19 .....	.4625
20 .....	.4875
21 .....	.5125
22 .....	.5375
23 .....	.5625
24 .....	.5875
25 .....	.6125
26 .....	.6375
27 .....	.6625
28 .....	.6875
29 .....	.7125
30 .....	.7375
31 .....	.7625
32 .....	.7875
33 .....	.8125
34 .....	.8375
35 .....	.8625
36 .....	.8875
37 .....	.9125
38 .....	.9375
39 .....	.9625
40 .....	.9875
41	852.0125
420375
430625
440875
451125
461375
471625
481875
492125
502375
512625

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TABLE OF 806–821/851–866 MHz CHANNEL DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
52 .....	.2875
53 .....	.3125
54 .....	.3375
55 .....	.3625
56 .....	.3875
57 .....	.4125
58 .....	.4375
59 .....	.4625
60 .....	.4875
61 .....	.5125
62 .....	.5375
63 .....	.5625
64 .....	.5875
65 .....	.6125
66 .....	.6375
67 .....	.6625
68 .....	.6875
69 .....	.7125
70 .....	.7375
71 .....	.7625
72 .....	.7875
73 .....	.8125
74 .....	.8375
75 .....	.8625
76 .....	.8875
77 .....	.9125
78 .....	.9375
79 .....	.9625
80 .....	.9875
81	853.0125
82 .....	.0375
83 .....	.0625
84 .....	.0875
85 .....	.1125
86 .....	.1375
87 .....	.1625
88 .....	.1875
89 .....	.2125
90 .....	.2375
91 .....	.2625
92 .....	.2875
93 .....	.3125
94 .....	.3375
95 .....	.3625
96 .....	.3875
97 .....	.4125
98 .....	.4375
99 .....	.4625
100 .....	.4875
101 .....	.5125
102 .....	.5375
103 .....	.5625
104 .....	.5875
105 .....	.6125
106 .....	.6375
107 .....	.6625
108 .....	.6875
109 .....	.7125
110 .....	.7375
111 .....	.7625
1127875
1138125
1148375
1158625
1168875
1179125
1189375
1199625
1209875

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TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
121	854.0125
122	.0375
123	.0625
124	.0875
125	.1125
126	.1375
127	.1625
128	.1875
129	.2125
130	.2375
131	.2625
132	.2875
133	.3125
134	.3375
135	.3625
136	.3875
137	.4125
138	.4375
139	.4625
140	.4875
141	.5125
142	.5375
143	.5625
144	.5875
145	.6125
146	.6375
147	.6625
148	.6875
149	.7125
150	.7375
151	.7625
152	.7875
153	.8125
154	.8375
155	.8625
156	.8875
157	.9125
158	.9375
159	.9625
160	.9875
161	855.0125
162	.0375
163	.0625
164	.0875
165	.1125
166	.1375
167	.1625
168	.1875
169	.2125
170	.2375
171	.2625
172	.2875
173	.3125
174	.3375
175	.3625
176	.3875
177	.4125
178	.4375
179	.4625
180	.4875
181	.5125
182	.5375
183	.5625
184	.5875
185	.6125
186	.6375
187	.6625
188	.6875
189	.7125

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
190	.7375
191	.7625
192	.7875
193	.8125
194	.8375
195	.8625
196	.8875
197	.9125
198	.9375
199	.9625
200	.9875
201	856.0125
202	.0375
203	.0625
204	.0875
205	.1125
206	.1375
207	.1625
208	.1875
209	.2125
210	.2375
211	.2625
212	.2875
213	.3125
214	.3375
215	.3625
216	.3875
217	.4125
218	.4375
219	.4625
220	.4875
221	.5125
222	.5375
223	.5625
224	.5875
225	.6125
226	.6375
227	.6625
228	.6875
229	.7125
230	.7375
231	.7625
232	.7875
233	.8125
234	.8375
235	.8625
236	.8875
237	.9125
238	.9375
239	.9625
240	.9875
241	857.0125
242	.0375
243	.0625
244	.0875
245	.1125
246	.1375
247	.1625
248	.1875
249	.2125
250	.2375
251	.2625
252	.2875
253	.3125
254	.3375
255	.3625
256	.3875
257	.4125
258	.4375

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
259 .....	.4625
260 .....	.4875
261 .....	.5125
262 .....	.5375
263 .....	.5625
264 .....	.5875
265 .....	.6125
266 .....	.6375
267 .....	.6625
268 .....	.6875
269 .....	.7125
270 .....	.7375
271 .....	.7625
272 .....	.7875
273 .....	.8125
274 .....	.8375
275 .....	.8625
276 .....	.8875
277 .....	.9125
278 .....	.9375
279 .....	.9625
280 .....	.9875
281	858.0125
282 .....	.0375
283 .....	.0625
284 .....	.0875
285 .....	.1125
286 .....	.1375
287 .....	.1625
288 .....	.1875
289 .....	.2125
290 .....	.2375
291 .....	.2625
292 .....	.2875
293 .....	.3125
294 .....	.3375
295 .....	.3625
296 .....	.3875
297 .....	.4125
298 .....	.4375
299 .....	.4625
300 .....	.4875
301 .....	.5125
302 .....	.5375
303 .....	.5625
304 .....	.5875
305 .....	.6125
306 .....	.6375
307 .....	.6625
308 .....	.6875
309 .....	.7125
310 .....	.7375
311 .....	.7625
312 .....	.7875
313 .....	.8125
314 .....	.8375
315 .....	.8625
316 .....	.8875
317 .....	.9125
318 .....	.9375
319 .....	.9625
320 .....	.9875
321	859.0125
322 .....	.0375
323 .....	.0625
324 .....	.0875
325 .....	.1125
326 .....	.1375
327 .....	.1625

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
328 .....	.1875
329 .....	.2125
330 .....	.2375
331 .....	.2625
332 .....	.2875
333 .....	.3125
334 .....	.3375
335 .....	.3625
336 .....	.3875
337 .....	.4125
338 .....	.4375
339 .....	.4625
340 .....	.4875
341 .....	.5125
342 .....	.5375
343 .....	.5625
344 .....	.5875
345 .....	.6125
346 .....	.6375
347 .....	.6625
348 .....	.6875
349 .....	.7125
350 .....	.7375
351 .....	.7625
352 .....	.7875
353 .....	.8125
354 .....	.8375
355 .....	.8625
356 .....	.8875
357 .....	.9125
358 .....	.9375
359 .....	.9625
360 .....	.9875
361	860.0125
362 .....	.0375
363 .....	.0625
364 .....	.0875
365 .....	.1125
366 .....	.1375
367 .....	.1625
368 .....	.1875
369 .....	.2125
370 .....	.2375
371 .....	.2625
372 .....	.2875
373 .....	.3125
374 .....	.3375
375 .....	.3625
376 .....	.3875
377 .....	.4125
378 .....	.4375
379 .....	.4625
380 .....	.4875
381 .....	.5125
382 .....	.5375
383 .....	.5625
384 .....	.5875
385 .....	.6125
386 .....	.6375
387 .....	.6625
3886875
3897125
3907375
3917625
3927875
3938125
3948375
3958625
3968875

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TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
397	.9125
398	.9375
399	.9625
400	.9875
401	861.0125
402	.0375
403	.0625
404	.0875
405	.1125
406	.1375
407	.1625
408	.1875
409	.2125
410	.2375
411	.2625
412	.2875
413	.3125
414	.3375
415	.3625
416	.3875
417	.4125
418	.4375
419	.4625
420	.4875
421	.5125
422	.5375
423	.5625
424	.5875
425	.6125
426	.6375
427	.6625
428	.6875
429	.7125
430	.7375
431	.7625
432	.7875
433	.8125
434	.8375
435	.8625
436	.8875
437	.9125
438	.9375
439	.9625
440	.9875
441	862.0125
442	.0375
443	.0625
444	.0875
445	.1125
446	.1375
447	.1625
448	.1875
449	.2125
450	.2375
451	.2625
452	.2875
453	.3125
454	.3375
455	.3625
456	.3875
457	.4125
458	.4375
459	.4625
460	.4875
461	.5125
462	.5375
463	.5625
464	.5875
465	.6125

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
466	.6375
467	.6625
468	.6875
469	.7125
470	.7375
471	.7625
472	.7875
473	.8125
474	.8375
475	.8625
476	.8875
477	.9125
478	.9375
479	.9625
480	.9875
481	863.0125
482	.0375
483	.0625
484	.0875
485	.1125
486	.1375
487	.1625
488	.1875
489	.2125
490	.2375
491	.2625
492	.2875
493	.3125
494	.3375
495	.3625
496	.3875
497	.4125
498	.4375
499	.4625
500	.4875
501	.5125
502	.5375
503	.5625
504	.5875
505	.6125
506	.6375
507	.6625
508	.6875
509	.7125
510	.7375
511	.7625
512	.7875
513	.8125
514	.8375
515	.8625
516	.8875
517	.9125
518	.9375
519	.9625
520	.9875
521	864.0125
522	.0375
523	.0625
524	.0875
525	.1125
526	.1375
527	.1625
528	.1875
529	.2125
530	.2375
531	.2625
532	.2875
533	.3125
534	.3375

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
535 .....	.3625
536 .....	.3875
537 .....	.4125
538 .....	.4375
539 .....	.4625
540 .....	.4875
541 .....	.5125
542 .....	.5375
543 .....	.5625
544 .....	.5875
545 .....	.6125
546 .....	.6375
547 .....	.6625
548 .....	.6875
549 .....	.7125
550 .....	.7375
551 .....	.7625
552 .....	.7875
553 .....	.8125
554 .....	.8375
555 .....	.8625
556 .....	.8875
557 .....	.9125
558 .....	.9375
559 .....	.9625
560 .....	.9875
561	865.0125
562 .....	.0375
563 .....	.0625
564 .....	.0875
565 .....	.1125
566 .....	.1375
567 .....	.1625
568 .....	.1875
569 .....	.2125
570 .....	.2375
571 .....	.2625
572 .....	.2875
573 .....	.3125
574 .....	.3375
575 .....	.3625
576 .....	.3875
577 .....	.4125
578 .....	.4375
579 .....	.4625
580 .....	.4875
581 .....	.5125
582 .....	.5375
583 .....	.5625
584 .....	.5875
585 .....	.6125
586 .....	.6375
587 .....	.6625
588 .....	.6875
589 .....	.7125
590 .....	.7375
591 .....	.7625
592 .....	.7875
593 .....	.8125
594 .....	.8375
595 .....	.8625
596 .....	.8875
597 .....	.9125
598 .....	.9375
599 .....	.9625
600	865.9875
601	866.0125
602 .....	.0375
603 .....	.0500

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
604 .....	.0625
605 .....	.0750
606 .....	.0875
607 .....	.1000
608 .....	.1125
609 .....	.1250
610 .....	.1375
611 .....	.1500
612 .....	.1625
613 .....	.1750
614 .....	.1875
615 .....	.2000
616 .....	.2125
617 .....	.2250
618 .....	.2375
619 .....	.2500
620 .....	.2625
621 .....	.2750
622 .....	.2875
623 .....	.3000
624 .....	.3125
625 .....	.3250
626 .....	.3375
627 .....	.3500
628 .....	.3625
629 .....	.3750
630 .....	.3875
631 .....	.4000
632 .....	.4125
633 .....	.4250
634 .....	.4375
635 .....	.4500
636 .....	.4625
637 .....	.4750
638 .....	.4875
639 .....	.5125
640 .....	.5375
641 .....	.5500
642 .....	.5625
643 .....	.5750
644 .....	.5875
645 .....	.6000
646 .....	.6125
647 .....	.6250
648 .....	.6375
649 .....	.6500
650 .....	.6625
651 .....	.6750
652 .....	.6875
653 .....	.7000
654 .....	.7125
655 .....	.7250
656 .....	.7375
657 .....	.7500
658 .....	.7625
659 .....	.7750
660 .....	.7875
661 .....	.8000
662 .....	.8125
663 .....	.8250
6648375
6658500
6668625
6678750
6688875
6699000
6709125
6719250
6729375

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TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
673	.9500
674	.9625
675	.9750
676	.9875
677	867.0125
678	.0375
679	.0500
680	.0625
681	.0750
682	.0875
683	.1000
684	.1125
685	.1250
686	.1375
687	.1500
688	.1625
689	.1750
690	.1875
691	.2000
692	.2125
693	.2250
694	.2375
695	.2500
696	.2625
697	.2750
698	.2875
699	.3000
700	.3125
701	.3250
702	.3375
703	.3500
704	.3625
705	.3750
706	.3875
707	.4000
708	.4125
709	.4250
710	.4375
711	.4500
712	.4625
713	.4750
714	.4875
715	.5125
716	.5375
717	.5500
718	.5625
719	.5750
720	.5875
721	.6000
722	.6125
723	.6250
724	.6375
725	.6500
726	.6625
727	.6750
728	.6875
729	.7000
730	.7125
731	.7250
732	.7375
733	.7500
734	.7625
735	.7750
736	.7875
737	.8000
738	.8125
739	.8250
740	.8375
741	.8500

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
742	.8625
743	.8750
744	.8875
745	.9000
746	.9125
747	.9250
748	.9375
749	.9500
750	.9625
751	.9750
752	.9875
753	868.0125
754	.0375
755	.0500
756	.0625
757	.0750
758	.0875
759	.1000
760	.1125
761	.1250
762	.1375
763	.1500
764	.1625
765	.1750
766	.1875
767	.2000
768	.2125
769	.2250
770	.2375
771	.2500
772	.2625
773	.2750
774	.2875
775	.3000
776	.3125
777	.3250
778	.3375
779	.3500
780	.3625
781	.3750
782	.3875
783	.4000
784	.4125
785	.4250
786	.4375
787	.4500
788	.4625
789	.4750
790	.4875
791	.5000
792	.5125
793	.5250
794	.5375
795	.5500
796	.5625
797	.5750
798	.5875
799	.6000
800	.6125
801	.6250
802	.6375
803	.6500
804	.6625
805	.6750
806	.6875
807	.7000
808	.7125
809	.7250
810	.7375

TABLE OF 806–821/851–866 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
811 .....	.7500
812 .....	.7625
813 .....	.7750
814 .....	.7875
815 .....	.8000
816 .....	.8125
817 .....	.8250
818 .....	.8375
819 .....	.8500
820 .....	.8625
821 .....	.8750
822 .....	.8875
823 .....	.9000
824 .....	.9125
825 .....	.9250
826 .....	.9375
827 .....	.9500
828 .....	.9625
829 .....	.9750
830 .....	.9875

TABLE OF 896–901/935–940 MHz CHANNEL
DESIGNATIONS

Channel No.	Base frequency (MHz)
1	935.0125
2 .....	.0250
3 .....	.0375
4 .....	.0500
5 .....	.0625
6 .....	.0750
7 .....	.0875
8 .....	.1000
9 .....	.1125
10 .....	.1250
11 .....	.1375
12 .....	.1500
13 .....	.1625
14 .....	.1750
15 .....	.1875
16 .....	.2000
17 .....	.2125
18 .....	.2250
19 .....	.2375
20 .....	.2500
21 .....	.2625
22 .....	.2750
23 .....	.2875
24 .....	.3000
25 .....	.3125
26 .....	.3250
27 .....	.3375
28 .....	.3500
29 .....	.3625
30 .....	.3750
31 .....	.3875
32 .....	.4000
33 .....	.4125
34 .....	.4250
35 .....	.4375
36 .....	.4500
37 .....	.4625
38 .....	.4750
39 .....	.4875
40 .....	.5000

TABLE OF 896–901/935–940 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
41 .....	.5125
42 .....	.5250
43 .....	.5375
44 .....	.5500
45 .....	.5625
46 .....	.5750
47 .....	.5875
48 .....	.6000
49 .....	.6125
50 .....	.6250
51 .....	.6375
52 .....	.6500
53 .....	.6625
54 .....	.6750
55 .....	.6875
56 .....	.7000
57 .....	.7125
58 .....	.7250
59 .....	.7375
60 .....	.7500
61 .....	.7625
62 .....	.7750
63 .....	.7875
64 .....	.8000
65 .....	.8125
66 .....	.8250
67 .....	.8375
68 .....	.8500
69 .....	.8625
70 .....	.8750
71 .....	.8875
72 .....	.9000
73 .....	.9125
74 .....	.9250
75 .....	.9375
76 .....	.9500
77 .....	.9625
78 .....	.9750
79 .....	.9875
80	936.0000
81 .....	.0125
82 .....	.0250
83 .....	.0375
84 .....	.0500
85 .....	.0625
86 .....	.0750
87 .....	.0875
88 .....	.1000
89 .....	.1125
90 .....	.1250
91 .....	.1375
92 .....	.1500
93 .....	.1625
94 .....	.1750
95 .....	.1875
96 .....	.2000
97 .....	.2125
98 .....	.2250
99 .....	.2375
100 .....	.2500
1012625
1022750
1032875
1043000
1053125
1063250
1073375
1083500
1093625

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TABLE OF 896–901/935–940 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
110	.3750
111	.3875
112	.4000
113	.4125
114	.4250
115	.4375
116	.4500
117	.4625
118	.4750
119	.4875
120	.5000
121	.5125
122	.5250
123	.5375
124	.5500
125	.5625
126	.5750
127	.5875
128	.6000
129	.6125
130	.6250
131	.6375
132	.6500
133	.6625
134	.6750
135	.6875
136	.7000
137	.7125
138	.7250
139	.7375
140	.7500
141	.7625
142	.7750
143	.7875
144	.8000
145	.8125
146	.8250
147	.8375
148	.8500
149	.8625
150	.8750
151	.8875
152	.9000
153	.9125
154	.9250
155	.9375
156	.9500
157	.9625
158	.9750
159	.9875
160	937.0000
161	.0125
162	.0250
163	.0375
164	.0500
165	.0625
166	.0750
167	.0875
168	.1000
169	.1125
170	.1250
171	.1375
172	.1500
173	.1625
174	.1750
175	.1875
176	.2000
177	.2125
178	.2250

TABLE OF 896–901/935–940 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
179	.2375
180	.2500
181	.2625
182	.2750
183	.2875
184	.3000
185	.3125
186	.3250
187	.3375
188	.3500
189	.3625
190	.3750
191	.3875
192	.4000
193	.4125
194	.4250
195	.4375
196	.4500
197	.4625
198	.4750
199	.4875
200	.5000
201	.5125
202	.5250
203	.5375
204	.5500
205	.5625
206	.5750
207	.5875
208	.6000
209	.6125
210	.6250
211	.6375
212	.6500
213	.6625
214	.6750
215	.6875
216	.7000
217	.7125
218	.7250
219	.7375
220	.7500
221	.7625
222	.7750
223	.7875
224	.8000
225	.8125
226	.8250
227	.8375
228	.8500
229	.8625
230	.8750
231	.8875
232	.9000
233	.9125
234	.9250
235	.9375
236	.9500
237	.9625
238	.9750
239	.9875
240	938.0000
241	.0125
242	.0250
243	.0375
244	.0500
245	.0625
246	.0750
247	.0875

TABLE OF 896–901/935–940 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
248 .....	.1000
249 .....	.1125
250 .....	.1250
251 .....	.1375
252 .....	.1500
253 .....	.1625
254 .....	.1750
255 .....	.1875
256 .....	.2000
257 .....	.2125
258 .....	.2250
259 .....	.2375
260 .....	.2500
261 .....	.2625
262 .....	.2750
263 .....	.2875
264 .....	.3000
265 .....	.3125
266 .....	.3250
267 .....	.3375
268 .....	.3500
269 .....	.3625
270 .....	.3750
271 .....	.3875
272 .....	.4000
273 .....	.4125
274 .....	.4250
275 .....	.4375
276 .....	.4500
277 .....	.4625
278 .....	.4750
279 .....	.4875
280 .....	.5000
281 .....	.5125
282 .....	.5250
283 .....	.5375
284 .....	.5500
285 .....	.5625
286 .....	.5750
287 .....	.5875
288 .....	.6000
289 .....	.6125
290 .....	.6250
291 .....	.6375
292 .....	.6500
293 .....	.6625
294 .....	.6750
295 .....	.6875
296 .....	.7000
297 .....	.7125
298 .....	.7250
299 .....	.7375
300 .....	.7500
301 .....	.7625
302 .....	.7750
303 .....	.7875
304 .....	.8000
305 .....	.8125
306 .....	.8250
307 .....	.8375
308 .....	.8500
309 .....	.8625
310 .....	.8750
311 .....	.8875
312 .....	.9000
313 .....	.9125
314 .....	.9250
315 .....	.9375
316 .....	.9500

TABLE OF 896–901/935–940 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
317 .....	.9625
318 .....	.9750
319 .....	.9875
320	939.0000
321 .....	.0125
322 .....	.0250
323 .....	.0375
324 .....	.0500
325 .....	.0625
326 .....	.0750
327 .....	.0875
328 .....	.1000
329 .....	.1125
330 .....	.1250
331 .....	.1375
332 .....	.1500
333 .....	.1625
334 .....	.1750
335 .....	.1875
336 .....	.2000
337 .....	.2125
338 .....	.2250
339 .....	.2375
340 .....	.2500
341 .....	.2625
342 .....	.2750
343 .....	.2875
344 .....	.3000
345 .....	.3125
346 .....	.3250
347 .....	.3375
348 .....	.3500
349 .....	.3625
350 .....	.3750
351 .....	.3875
352 .....	.4000
353 .....	.4125
354 .....	.4250
355 .....	.4375
356 .....	.4500
357 .....	.4625
358 .....	.4750
359 .....	.4875
360 .....	.5000
361 .....	.5125
362 .....	.5250
363 .....	.5375
364 .....	.5500
365 .....	.5625
366 .....	.5750
367 .....	.5875
368 .....	.6000
369 .....	.6125
370 .....	.6250
371 .....	.6375
372 .....	.6500
373 .....	.6625
374 .....	.6750
375 .....	.6875
376 .....	.7000
377 .....	.7125
378 .....	.7250
379 .....	.7375
380 .....	.7500
381 .....	.7625
382 .....	.7750
383 .....	.7875
384 .....	.8000
385 .....	.8125

TABLE OF 896–901/935–940 MHz CHANNEL DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
386 .....	.8250
387 .....	.8375
388 .....	.8500
389 .....	.8625
390 .....	.8750
391 .....	.8875
392 .....	.9000
393 .....	.9125
394 .....	.9250
395 .....	.9375
396 .....	.9500
397 .....	.9625
398 .....	.9750
399 .....	.9875

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 51928, Nov. 15, 1983; 51 FR 37402, Oct. 22, 1986; 52 FR 29856, Aug. 12, 1987; 53 FR 1025, Jan. 15, 1988; 54 FR 38681, Sept. 20, 1989; 54 FR 39740, Sept. 28, 1989]

§ 90.615 Spectrum blocks available in the General Category for 800 MHz SMR General Category.

TABLE 1—806–821/851–866 MHz BAND CHANNELS (150 CHANNELS)

Spectrum block	Channel Nos.
D	1 through 50.
E	51 through 100.
F	101 through 150.

[62 FR 41214, July 31, 1997]

§ 90.617 Frequencies in the 809.750–824/854.750–869 MHz, and 896–901/935–940 MHz bands available for trunked or conventional system use in non-border areas.

(a) The channels listed in table 1 and paragraph (a)(1) of this section are available to eligible applicants in the Public Safety Category which consists of licensees eligible in the Public Safety Pool of subpart B of this part. These frequencies are available in areas farther than 110 km (68.4 miles) from the U.S./Mexican border, and 140 km (87 miles) from the U.S./Canadian border. Specialized Mobile Radio Systems will not be authorized in this category. These channels are available for inter-category sharing as indicated in § 90.621(g).

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TABLE 1—806–821/851–866 MHz BAND CHANNELS (70 CHANNELS)

Group No.	Channel Nos.
209	209–249–289–329–369
210	210–250–290–330–370
211	211–251–291–331–371
218	218–258–298–338–378
219	219–259–299–339–379
220	220–260–300–340–380
229	229–269–309–349–389
230	230–270–310–350–390
231	231–271–311–351–391
238	238–278–318–358–398
239	239–279–319–359–399
240	240–280–320–360–400
Single channels	159, 169, 179, 189, 199, 160, 170, 180, 190, 200

(1) Channels numbers 601–830 are also available to eligible applicants in the Public Safety Category in areas farther than 110 km (68.4 miles) from the U.S./Mexican border, and 140 km (87 miles) from the U.S./Canadian border. The assignment of these channels will be done in accordance with the policies defined in the *Report and Order* of Gen. Docket No. 87–112 (See § 90.16). The following channels are available only for mutual aid purposes as defined in Gen. Docket No. 87–112: channels 601, 639, 677, 715, 753.

(b) The channels listed in Table 2A are available to eligible applicants in the Industrial/Land Transportation Category (consisting of Power, Petroleum, Forest Products, Film and Video Production, Relay Press, Special Industrial, Manufacturers, Telephone Maintenance, Motor Carrier, Railroad, Taxicab, and Automobile Emergency licensees, as defined in § 90.7). These frequencies are available in areas farther than 110 km (68.4 miles) from the U.S./Mexico border and farther than 140 km (87.0 miles) from the U.S./Canada border. Specialized Mobile Radio (SMR) systems will not be authorized on these frequencies. These channels are available for inter-category sharing as indicated in § 90.621(g).

TABLE 2A—INDUSTRIAL/LAND TRANSPORTATION CATEGORY 806–821/851–866 MHz BAND CHANNELS (50 CHANNELS):

Group No.	Channel Nos.
212	212–252–292–332–372
213	213–253–293–333–373
214	214–254–294–334–374

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TABLE 2A—INDUSTRIAL/LAND TRANSPORTATION CATEGORY 806–821/851–866 MHZ BAND CHANNELS (50 CHANNELS):—Continued

Group No.	Channel Nos.
215	215–255–295–335–375
216	216–256–296–336–376
217	217–257–297–337–377
Single channels	155, 165, 175, 185, 195, 156, 166, 176, 186, 196, 157, 167, 177, 187, 197, 158, 168, 178, 188, 198

TABLE 2B—INDUSTRIAL/LAND TRANSPORTATION CATEGORY 896–901/935–940 MHZ BAND CHANNELS (99 CHANNELS):

For multichannel systems channels may be grouped vertically or horizontally as they appear in the table.

Channel Nos.

31–32–33–34–35	231–232–233–234–235
36–37–38–39–40	236–237–238–239–240
71–72–73–74–75	271–272–273–274–275
76–77–78–79–80	276–277–278–279–280
111–112–113–114–115	311–312–313–314–315
116–117–118–119–120	316–317–318–319–320
151–152–153–154–155	351–352–353–354–355
156–157–158–159–160	356–357–358–359–360
191–192–193–194–195	391–392–393–394–395
196–197–198–199–200	396–397–398–399.

(c) The channels listed in Table 3A are available to eligible applicants in the Business Radio Category. This category includes those entities eligible in the Industrial/Business Pool of subpart C of this part and does not include Special Mobilized Radio Systems as defined in § 90.603(c). These frequencies are available in areas farther than 110 km (68.4 miles) from the U.S./Mexico border and farther than 140 km (87.0 miles) from the U.S./Canada border. Specialized Mobile Radio Systems will not be authorized on these frequencies. These channels are available for inter-category sharing as indicated in § 90.621(g).

TABLE 3A—BUSINESS CATEGORY 806–821/851–866 MHZ BAND CHANNELS (50 CHANNELS):

Group No.	Channel Nos.
232	232–272–312–352–392
233	233–273–313–353–393
234	234–274–314–354–394
235	235–275–315–355–395
236	236–276–316–356–396
237	237–277–317–357–397
Single channels	151, 161, 171, 181, 191, 152, 162, 172, 182, 192,

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TABLE 3A—BUSINESS CATEGORY 806–821/851–866 MHZ BAND CHANNELS (50 CHANNELS):—Continued

Group No.	Channel Nos.
	153, 163, 173, 183, 193, 154, 164, 174, 184, 194

TABLE 3B—BUSINESS CATEGORY 896–901/935–940 MHZ BAND CHANNELS (100 CHANNELS):

For multichannel systems, channels may be grouped vertically or horizontally as they appear in the table.

11–12–13–14–15	211–212–213–214–215
16–17–18–19–20	216–217–218–219–220
51–52–53–54–55	251–252–253–254–255
56–57–58–59–60	256–257–258–259–260
91–92–93–94–95	291–292–293–294–295
96–97–98–99–100	296–297–298–299–300
131–132–133–134–135	331–332–333–334–335
136–137–138–139–140	336–337–338–339–340
171–172–173–174–175	371–372–373–374–375
176–177–178–179–180	376–377–378–379–380.

(d) The channels listed in Tables 4A and 4B are available only to eligibles in the SMR category which consists of Specialized Mobile Radio (SMR) stations and eligible end users. The frequencies listed in Table 4A are available to SMR eligibles desiring to be authorized for EA-based service areas in accordance with § 90.681. SMR licensees licensed on Channels 401–600 on or before March 3, 1996, may continue to utilize these frequencies within their existing service areas, subject to the mandatory relocation provisions of § 90.699. This paragraph deals with the assignment of frequencies only in areas farther than 110 km (68.4 miles) from the U.S./Mexico border and farther than 140 km (87) miles from the U.S./Canada border. See § 90.619 for the assignment of SMR frequencies in these border areas. For stations located within 113 km (70 miles) of Chicago, channels 401–600 will be assigned in blocks as outlined in Table 4C.

TABLE 4A—SMR CATEGORY 806–821/851–866 MHZ BAND CHANNELS (280 CHANNELS)

Spectrum block	Channel Nos.
A	401 through 420
B	421 through 480
C	481 through 600
G	201–241–281–321–361
H	202–242–282–322–362
I	203–243–283–323–363

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TABLE 4A—SMR CATEGORY 806–821/851–866
MHZ BAND CHANNELS (280 CHANNELS)—
Continued

Spectrum block	Channel Nos.
J	204–244–284–324–364
K	205–245–285–325–365
L	206–246–286–326–366
M	207–247–287–327–367
N	208–248–288–328–368
O	221–261–301–341–381
P	222–262–302–342–382
Q	223–263–303–343–383
R	224–264–304–344–384
S	225–265–305–345–385
T	226–266–306–346–386
U	227–267–307–347–387
V	228–268–308–348–388

TABLE 4B—SMR CATEGORY 896–901/935–940
MHZ BAND-CHANNELS (200 CHANNELS)

Block	Channel Nos.
A	1–2–3–4–5–6–7–8–9–10
B	21–22–23–24–25–26–27–28–29–30
C	41–42–43–44–45–46–47–48–49–50
D	61–62–63–64–65–66–67–68–69–70
E	81–82–83–84–85–86–87–88–89–90
F	101–102–103–104–105–106–107–108–109–110
G	121–122–123–124–125–126–127–128–129–130
H	141–142–143–144–145–146–147–148–149–150
I	161–162–163–164–165–166–167–168–169–170
J	181–182–183–184–185–186–187–188–189–190
K	201–202–203–204–205–206–207–208–209–210
L	221–222–223–224–225–226–227–228–229–230
M	241–242–243–244–245–246–247–248–249–250
N	261–262–263–264–265–266–267–268–269–270
O	281–282–283–284–285–286–287–288–289–290
P	301–302–303–304–305–306–307–308–309–310
Q	321–322–323–324–325–326–327–328–329–330
R	341–342–343–344–345–346–347–348–349–350
S	361–362–363–364–365–366–367–368–369–370
T	381–382–383–384–385–386–387–388–389–390

TABLE 4C—SMR CATEGORY—CHICAGO PLAN ^{2, 3}

Group No.	Channel Nos.
401 ¹	401 through 410
411	411–447–483–519–555
412	412–448–484–520–556
413	413–449–485–521–557
414	414–450–486–522–558
415	415–451–487–523–559
416	416–452–488–524–560
417	417–453–489–525–561
418	418–454–490–526–562
419	419–455–491–527–563
420	420–456–492–528–564
421	421–457–493–529–565
422	422–458–494–530–566
423	423–459–495–531–567
424	424–460–496–532–568
425	425–461–497–533–569
426	426–462–498–534–570
427	427–463–499–535–571
428	428–464–500–536–572
429	429–465–501–537–573
430	430–466–502–538–574
431	431–467–503–539–575
432	432–468–504–540–576
433	433–469–505–541–577

TABLE 4C—SMR CATEGORY—CHICAGO PLAN
^{2, 3}—Continued

Group No.	Channel Nos.
434	434–470–506–542–578
435	435–471–507–543–579
436	436–472–508–544–580
437	437–473–509–545–581
438	438–474–510–546–582
439	439–475–511–547–583
440	440–476–512–548–584
441	441–477–513–549–585
442	442–478–514–550–586
443	443–479–515–551–587
444	444–480–516–552–588
445	445–481–517–553–589
446	446–482–518–554–590
591	591–592–593–594–595
596	596–597–598–599–600

¹ Reserved for contiguous assignments or as a frequency pool for assignments to systems with odd number of channels.

² These frequencies will be authorized only in the area encompassed by a 113 km (70 mile) radius centered at 41°52'28" N. 87°38'22" W.

³ All stations located beyond the 113 km (70 mile) distance authorized on or before August 16, 1982 to use these frequencies may continue to do so. Stations beyond the 113 km (70 mile) distance authorized after August 16, 1982, shall employ frequencies listed in table 4A subject to the provisions of § 90.621 (b) or (c) as applicable.

[47 FR 41032, Sept. 16, 1982, as amended at 47 FR 51883, Nov. 18, 1982; 51 FR 37404, Oct. 22, 1986; 52 FR 3662, Feb. 5, 1987; 52 FR 29856, Aug. 12, 1987; 53 FR 1026, Jan. 15, 1988; 53 FR 12156, Apr. 13, 1988; 54 FR 38682, Sept. 20, 1989; 58 FR 31476, June 3, 1993; 58 FR 44962, Aug. 25, 1993; 60 FR 21990, May 4, 1995; 60 FR 48918, Sept. 21, 1995; 61 FR 6156, Feb. 16, 1996; 61 FR 6576, Feb. 21, 1996; 62 FR 18934, Apr. 17, 1997; 62 FR 41214, July 31, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18934, Apr. 17, 1997, § 90.617 was amended by revising the first sentence of the introductory text of paragraph (a), the second sentences of paragraphs (a)(1) and (c), and the first sentence of paragraph (b), effective Oct. 17, 1997.

§ 90.619 Frequencies available for use in the U.S./Mexico and U.S./Canada border areas.

(a) U.S./Mexico border area. The channels listed in tables 1A, 2A, 3A and 4A are offset 12.5 kHz lower in frequency than those specified in the 806–821/851–866 MHz table in § 90.613. The Channel 201 base frequency will be 856.000 MHz, followed by Channel 202 at 856.025 MHz and proceeding with uniform 25 kHz channeling to Channel 400 at 860.975 MHz. Mobile station frequencies will be 45 MHz lower in frequency. These channels are available for assignment for conventional or trunked systems only in areas 110 kilometers (68.4 miles) or less from the U.S./Mexico border. Stations located on

Mt. Lemmon, serving the Tucson, AZ area, will only be authorized offset frequencies. The channels listed in tables 2B, 3B, and 4B correspond to those specified in the 896–901/935–940 MHz table in § 90.613 and are not offset. Mobile station frequencies will be 39 MHz lower in frequency. The frequencies listed in tables 2B, 3B, and 4B are not available for licensing in the U.S./Mexico border area until June 11, 1993.

(1) Table 1A lists the channels in the 806–821/851–866 MHz band that are available for assignment to eligible applicants in the Public Safety Category which consists of licensees eligible in the Public Safety Pool of subpart B of this part. Specialized Mobile Radio Systems (SMRS) will not be authorized in this category. These channels are available for intercategory sharing as indicated in § 90.621(g).

TABLE 1—UNITED STATES/MEXICO BORDER AREA, PUBLIC SAFETY CATEGORY 806–821/851–866 MHz Band (85 CHANNELS)

Offset group No.	Offset channel Nos.
201 ¹	241–281–321–361
202	202–242–282–322–362
203	203–243–283–323–363
204	204–244–284–324–364
205	205–245–285–325–365
206	206–246–286–326–366
207	207–247–287–327–367
208	208–248–288–328–368
209	209–249–289–329–369
210	210–250–290–330–370
211	211–251–291–331–371
401	401–441–481–521–561
403	403–443–483–523–563
405	405–445–485–525–565
407	407–447–487–527–567
409	409–449–489–529–569
411	411–451–491–531–571

¹ Offset Group 201 is available for conventional system use only. Offset Channel 201 is not available for use in the U.S./Mexico border area.

(2) Certain channels in the 821–824/866–869 MHz band are also available to eligible applicants in the Public Safety Category in areas within 110 kilometers (68.4 miles) of the U.S./Mexico border. These channels will be assigned according to the policies defined in the *Report and Order* of Gen. Docket No. 87–112 (See § 90.16). The following channels are available only for mutual aid purposes as defined in Gen. Docket No. 87–112: channels 601, 639, 677, 715, and 753. Certain channels in the 896–901/935–940 MHz band are also available in areas within 110 kilometers (68.4 miles) of the

U.S./Mexico border. The specific channels that are available for licensing in the bands 821–824/866–869 and 896–901/935–940 MHz within 110 kilometers (68.4 miles) of the Mexico border are listed in tables 1B, 2B, 3B, and 4B and are subject to Effective Radiated Power (ERP) and Antenna Height limitations as indicated in table 1C. In addition, all channels designated for use within Mexico in the 821–824/866–869 MHz and 896–901/935–940 MHz bands are available for assignment to U.S. stations within 110 kilometers (68.4 miles) of the Mexico border if the maximum power flux density (pfd) of the station's transmitted signal at any point at or beyond the border does not exceed –107 dB(W/m²). The spreading loss must be calculated using the free space formula taking into account any antenna discrimination in the direction of the border. Authorizations for stations using channels allotted to Mexico on a primary basis will be secondary to Mexican operations and conditioned to require that licensees take immediate action to eliminate any harmful interference resulting from the station's transmitted signal exceeding –107 dB(W/m²).

TABLE 1B—UNITED STATES/MEXICO BORDER AREA, PUBLIC SAFETY CATEGORY 821–824/866–869 MHz BAND (107 CHANNELS)

Channel	Base frequency	Mobile frequency	Country
601	866.0125	821.0125	Both countries.
.....	866.0250	821.0250	Not available.
602	866.0375	821.0375	U.S.
603	866.0500	821.0500	U.S.
604	866.0625	821.0625	U.S.
605	866.0750	821.0750	U.S.
606	866.0875	821.0875	U.S.
607	866.1000	821.1000	U.S.
608	866.1125	821.1125	U.S.
609	866.1250	821.1250	U.S.
610	866.1375	821.1375	U.S.
611	866.1500	821.1500	Guard channel.
612	866.1625	821.1625	Mexico.
613	866.1750	821.1750	Mexico.
614	866.1875	821.1875	Mexico.
615	866.2000	821.2000	Mexico.
616	866.2125	821.2125	Mexico.
617	866.2250	821.2250	Mexico.
618	866.2375	821.2375	Mexico.
619	866.2500	821.2500	Mexico.
620	866.2625	821.2625	Mexico.
621	866.2750	821.2750	Mexico.
622	866.2875	821.2875	Mexico.
623	866.3000	821.3000	Mexico.
624	866.3125	821.3125	Mexico.
625	866.3250	821.3250	Mexico.
626	866.3375	821.3375	Mexico.
627	866.3500	821.3500	Mexico.

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TABLE 1B—UNITED STATES/MEXICO BORDER AREA, PUBLIC SAFETY CATEGORY 821–824/866–869 MHz BAND (107 CHANNELS)—Continued

Channel	Base frequency	Mobile frequency	Country
628	866.3625	821.3625	Mexico.
629	866.3750	821.3750	Guard channel.
630	866.3875	821.3875	U.S.
631	866.4000	821.4000	U.S.
632	866.4125	821.4125	U.S.
633	866.4250	821.4250	U.S.
634	866.4375	821.4375	U.S.
635	866.4500	821.4500	U.S.
636	866.4625	821.4625	U.S.
637	866.4750	821.4750	U.S.
638	866.4875	821.4875	U.S.
	866.5000	821.5000	Not available.
639	866.5125	821.5125	Both countries.
	866.5250	821.5250	Not available.
640	866.5375	821.5375	U.S.
641	866.5500	821.5500	U.S.
642	866.5625	821.5625	U.S.
643	866.5750	821.5750	U.S.
644	866.5875	821.5875	U.S.
645	866.6000	821.6000	U.S.
646	866.6125	821.6125	U.S.
647	866.6250	821.6250	U.S.
648	866.6375	821.6375	U.S.
649	866.6500	821.6500	Guard channel.
650	866.6625	821.6625	Mexico.
651	866.6750	821.6750	Mexico.
652	866.6875	821.6875	Mexico.
653	866.7000	821.7000	Mexico.
654	866.7125	821.7125	Mexico.
655	866.7250	821.7250	Mexico.
656	866.7375	821.7375	Mexico.
657	866.7500	821.7500	Mexico.
658	866.7625	821.7625	Mexico.
659	866.7750	821.7750	Mexico.
660	866.7875	821.7875	Mexico.
661	866.8000	821.8000	Mexico.
662	866.8125	821.8125	Mexico.
663	866.8250	821.8250	Mexico.
664	866.8375	821.8375	Mexico.
665	866.8500	821.8500	Mexico.
666	866.8625	821.8625	Mexico.
667	866.8750	821.8750	Guard channel.
668	866.8875	821.8875	U.S.
669	866.9000	821.9000	U.S.
670	866.9125	821.9125	U.S.
671	866.9250	821.9250	U.S.
672	866.9375	821.9375	U.S.
673	866.9500	821.9500	U.S.
674	866.9625	821.9625	U.S.
675	866.9750	821.9750	U.S.
676	866.9875	821.9875	U.S.
	867.0000	822.0000	Not available.
677	867.0125	822.0125	Both countries.
	867.0250	822.0250	Not available.
678	867.0375	822.0375	U.S.
679	867.0500	822.0500	U.S.
680	867.0625	822.0625	U.S.
681	867.0750	822.0750	U.S.
682	867.0875	822.0875	U.S.
683	867.1000	822.1000	U.S.
684	867.1125	822.1125	U.S.
685	867.1250	822.1250	U.S.
686	867.1375	822.1375	U.S.
687	867.1500	822.1500	Guard channel.
688	867.1625	822.1625	Mexico.
689	867.1750	822.1750	Mexico.
690	867.1875	822.1875	Mexico.

TABLE 1B—UNITED STATES/MEXICO BORDER AREA, PUBLIC SAFETY CATEGORY 821–824/866–869 MHz BAND (107 CHANNELS)—Continued

Channel	Base frequency	Mobile frequency	Country
691	867.2000	822.2000	Mexico.
692	867.2125	822.2125	Mexico.
693	867.2250	822.2250	Mexico.
694	867.2375	822.2375	Mexico.
695	867.2500	822.2500	Mexico.
696	867.2625	822.2625	Mexico.
697	867.2750	822.2750	Mexico.
698	867.2875	822.2875	Mexico.
699	867.3000	822.3000	Mexico.
700	867.3125	822.3125	Mexico.
701	867.3250	822.3250	Mexico.
702	867.3375	822.3375	Mexico.
703	867.3500	822.3500	Mexico.
704	867.3625	822.3625	Mexico.
705	867.3750	822.3750	Guard channel.
706	867.3875	822.3875	U.S.
707	867.4000	822.4000	U.S.
708	867.4125	822.4125	U.S.
709	867.4250	822.4250	U.S.
710	867.4375	822.4375	U.S.
711	867.4500	822.4500	U.S.
712	867.4625	822.4625	U.S.
713	867.4750	822.4750	U.S.
714	867.4875	822.4875	U.S.
	867.5000	822.5000	Not available.
715	867.5125	822.5125	Both countries.
	867.5250	822.5250	Not available.
716	867.5375	822.5375	U.S.
717	867.5500	822.5500	U.S.
718	867.5625	822.5625	U.S.
719	867.5750	822.5750	U.S.
720	867.5875	822.5875	U.S.
721	867.6000	822.6000	U.S.
722	867.6125	822.6125	U.S.
723	867.6250	822.6250	U.S.
724	867.6375	822.6375	U.S.
725	867.6500	822.6500	Guard channel.
726	867.6625	822.6625	Mexico.
727	867.6750	822.6750	Mexico.
728	867.6875	822.6875	Mexico.
729	867.7000	822.7000	Mexico.
730	867.7125	822.7125	Mexico.
731	867.7250	822.7250	Mexico.
732	867.7375	822.7375	Mexico.
733	867.7500	822.7500	Mexico.
734	867.7625	822.7625	Mexico.
735	867.7750	822.7750	Mexico.
736	867.7875	822.7875	Mexico.
737	867.8000	822.8000	Mexico.
738	867.8125	822.8125	Mexico.
739	867.8250	822.8250	Mexico.
740	867.8375	822.8375	Mexico.
741	867.8500	822.8500	Mexico.
742	867.8625	822.8625	Guard channel.
743	867.8750	822.8750	U.S.
744	867.8875	822.8875	U.S.
745	867.9000	822.9000	U.S.
746	867.9125	822.9125	U.S.
747	867.9250	822.9250	U.S.
748	867.9375	822.9375	U.S.
749	867.9500	822.9500	U.S.
750	867.9625	822.9625	U.S.
751	867.9750	822.9750	U.S.
752	867.9875	822.9875	U.S.
	868.0000	823.0000	Not available.
753	868.0125	823.0125	Both countries.
	868.0250	823.0250	Not available.

TABLE 1B—UNITED STATES/MEXICO BORDER AREA, PUBLIC SAFETY CATEGORY 821–824/866–869 MHz BAND (107 CHANNELS)—Continued

Channel	Base frequency	Mobile frequency	Country
754	868.0375	823.0375	U.S.
755	868.0500	823.0500	U.S.
756	868.0625	823.0625	U.S.
757	868.0750	823.0750	U.S.
758	868.0875	823.0875	U.S.
759	868.1000	823.1000	U.S.
760	868.1125	823.1125	U.S.
761	868.1250	823.1250	U.S.
762	868.1375	823.1375	U.S.
763	868.1500	823.1500	Guard channel.
764	868.1625	823.1625	Mexico.
765	868.1750	823.1750	Mexico.
766	868.1875	823.1875	Mexico.
767	868.2000	823.2000	Mexico.
768	868.2125	823.2125	Mexico.
769	868.2250	823.2250	Mexico.
770	868.2375	823.2375	Mexico.
771	868.2500	823.2500	Mexico.
772	868.2625	823.2625	Mexico.
773	868.2750	823.2750	Mexico.
774	868.2875	823.2875	Mexico.
775	868.3000	823.3000	Mexico.
776	868.3125	823.3125	Mexico.
777	868.3250	823.3250	Mexico.
778	868.3375	823.3375	Mexico.
779	868.3500	823.3500	Mexico.
780	868.3625	823.3625	Guard channel.
781	868.3750	823.3750	U.S.
782	868.3875	823.3875	U.S.
783	868.4000	823.4000	U.S.
784	868.4125	823.4125	U.S.
785	868.4250	823.4250	U.S.
786	868.4375	823.4375	U.S.
787	868.4500	823.4500	U.S.
788	868.4625	823.4625	U.S.
789	868.4750	823.4750	U.S.
790	868.4875	823.4875	U.S.
791	868.5000	823.5000	U.S.
792	868.5125	823.5125	U.S.
793	868.5250	823.5250	U.S.
794	868.5375	823.5375	U.S.
795	868.5500	823.5500	U.S.
796	868.5625	823.5625	U.S.
797	868.5750	823.5750	U.S.
798	868.5875	823.5875	U.S.
799	868.6000	823.6000	U.S.
800	868.6125	823.6125	Guard channel.
801	868.6250	823.6250	Mexico.
802	868.6375	823.6375	Mexico.
803	868.6500	823.6500	Mexico.
804	868.6625	823.6625	Mexico.
805	868.6750	823.6750	Mexico.
806	868.6875	823.6875	Mexico.
807	868.7000	823.7000	Mexico.
808	868.7125	823.7125	Mexico.
809	868.7250	823.7250	Mexico.
810	868.7375	823.7375	Mexico.
811	868.7500	823.7500	Mexico.
812	868.7625	823.7625	Mexico.
813	868.7750	823.7750	Mexico.
814	868.7875	823.7875	Mexico.
815	868.8000	823.8000	Mexico.
816	868.8125	823.8125	Mexico.
817	868.8250	823.8250	Mexico.
818	868.8375	823.8375	Mexico.
819	868.8500	823.8500	Mexico.
820	868.8625	823.8625	Mexico.

TABLE 1B—UNITED STATES/MEXICO BORDER AREA, PUBLIC SAFETY CATEGORY 821–824/866–869 MHz BAND (107 CHANNELS)—Continued

Channel	Base frequency	Mobile frequency	Country
821	868.8750	823.8750	Mexico.
822	868.8875	823.8875	Mexico.
823	868.9000	823.9000	Mexico.
824	868.9125	823.9125	Guard channel.
825	868.9250	823.9250	U.S.
826	868.9375	823.9375	U.S.
827	868.9500	823.9500	U.S.
828	868.9625	823.9625	U.S.
829	868.9750	823.9750	U.S.
830	868.9875	823.9875	U.S.

TABLE 1C—LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO ANTENNA HEIGHTS OF BASE STATIONS IN THE 821–824/866–869 MHz AND 896–901/935–940 MHz BANDS WITHIN 110 KILOMETERS (68.4 MILES) OF THE MEXICAN BORDER

Antenna height above mean sea level		ERP
Meters	Feet	Watts (maximum)
0–503	0–1650	500
504–609	1651–2000	350
610–762	2001–2500	200
763–914	2501–3000	140
915–1066	3001–3500	100
1067–1219	3501–4000	75
1220–1371	4001–4500	70
1372–1523	4501–5000	65
Above 1523	Above 5000	5

(3) Tables 2A and 2B list the channels that are available for assignment to eligible applicants in the Industrial/Land Transportation Category (consisting of Power, Petroleum, Forest Products, Film and Video Production, Relay Press, Special Industrial, Manufacturers, Telephone Maintenance, Motor Carrier, Railroad, Taxicab, and Automobile Emergency licensees, as defined in § 90.7). New applications for Specialized Mobile Radio systems will not be accepted for these channels after March 18, 1996.

TABLE 2A—UNITED STATES/MEXICO BORDER AREA, INDUSTRIAL/LAND TRANSPORTATION CATEGORY 806–821/851–866 MHz BAND (60 CHANNELS):

Offset group No.	Offset channel Nos.
212	212–252–292–332–372
213	213–253–293–333–373
214	214–254–294–334–374
215	215–255–295–335–375
216	216–256–296–336–376

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TABLE 2A—UNITED STATES/MEXICO BORDER AREA, INDUSTRIAL/LAND TRANSPORTATION CATEGORY 806–821/851–866 MHZ BAND (60 CHANNELS):—Continued

Offset group No.	Offset channel Nos.
217	217–257–297–337–377
218	218–258–298–338–378
219	219–259–299–339–379
413	413–453–493–533–573
415	415–455–495–535–575
417	417–457–497–537–577
419	419–459–499–539–579

TABLE 2B—UNITED STATES/MEXICO BORDER AREA, INDUSTRIAL/LAND TRANSPORTATION CATEGORY 896–901/935–940 MHZ BAND (99 CHANNELS):

For multichannel systems, channels may be grouped vertically or horizontally as they appear in the table. Channels numbered above 200 may be used only subject to the power flux density limits stated in paragraph (a)(2) of this section:

Channel Nos.

31–32–33–34–35	231–232–233–234–235
36–37–38–39–40	236–237–238–239–240
71–72–73–74–75	271–272–273–274–275
76–77–78–79–80	276–277–278–279–280
111–112–113–114–115	311–312–313–314–315
116–117–118–119–120	316–317–318–319–320
151–152–153–154–155	351–352–353–354–355
156–157–158–159–160	356–357–358–359–360
191–192–193–194–195	391–392–393–394–395
196–197–198–199–200	396–397–398–399

(4) Tables 3A and 3B list the channels that are available for assignment to eligible applicants in the Business Radio Category. This category includes those entities eligible in the Industrial/Business Pool of subpart C of this part and does not include Special Mobilized Radio Systems as defined in §90.603(c). These channels are available for inter-category sharing as indicated in §90.621(g).

TABLE 3A—UNITED STATES/MEXICO BORDER AREA, BUSINESS CATEGORY 806–821/851–866 MHZ BANDS (60 CHANNELS)

Offset group No.	Offset channel Nos.
220	220–260–300–340–380
221	221–261–301–341–381
222	222–262–302–342–382
223	223–263–303–343–383
224	224–264–304–344–384
225	225–265–305–345–385
226	226–266–306–346–386
227	227–267–307–347–387

TABLE 3A—UNITED STATES/MEXICO BORDER AREA, BUSINESS CATEGORY 806–821/851–866 MHZ BANDS (60 CHANNELS):—Continued

Offset group No.	Offset channel Nos.
421	421–461–501–541–581
423	423–463–503–543–583
425	425–465–505–545–585
427	427–467–507–547–587

TABLE 3B—UNITED STATES/MEXICO BORDER AREA, BUSINESS CATEGORY 896–901/935–940 MHZ BAND (100 CHANNELS):

For multichannel systems, channels may be grouped vertically or horizontally as they appear in the table. Channels numbered above 200 may be used only subject to the power flux density limits stated in paragraph (a)(2) of this section.

Channel Nos.

11–12–13–14–15	211–212–213–214–215
16–17–18–19–20	216–217–218–219–220
51–52–53–54–55	251–252–253–254–255
56–57–58–59–60	256–257–258–259–260
91–92–93–94–95	291–292–293–294–295
96–97–98–99–100	296–297–298–299–300
131–132–133–134–135	331–332–333–334–335
136–137–138–139–140	336–337–338–339–340
171–172–173–174–175	371–372–373–374–375
176–177–178–179–180	376–377–378–379–380

(5) Tables 4A and 4B list the channels that are available for assignment for the SMR Category (consisting of Specialized Mobile Radio systems as defined in §90.7).

These channels are not available for inter-category sharing.

TABLE 4A—UNITED STATES-MEXICO BORDER AREA, SMR AND GENERAL CATEGORIES 806–821/851–866 MHZ BAND (95 CHANNELS)

Spectrum block	Offset channel Nos.
EA-Based SMR Category (83 Channels)	
A	398–399–400.
B	429–431–433–435–437–439–469–471–473–475–477–479.
C	509–511–513–515–517–519–549–551–553–555–557–559–589–591–593–595–597–599.
G	229–272–349.
H	230–273–350.
I	231–274–351.
J	232–278–352.
K	233–279–353.
L	234–280–354.
M	235–309–358.
N	236–310–359.
O	237–311–360.

TABLE 4A—UNITED STATES-MEXICO BORDER AREA, SMR AND GENERAL CATEGORIES 806–821/851–866 MHz BAND (95 CHANNELS)—Continued

Spectrum block	Offset channel Nos.
P	238–312–389.
Q	239–313–390.
R	240–314–391.
S	269–318–392.
T	270–319–393.
U	271–320–394.
V	228–268–308–348–388.
General Category (12 Channels)	
D	275–315–355–395.
E	276–316–356–396.
F	277–317–357–397.

TABLE 4B—UNITED STATES-MEXICO BORDER AREA, SMR CATEGORY 896–901/935–940 MHz BAND (200 CHANNELS)

Block	Channel Nos.
A	1–2–3–4–5–6–7–8–9–10
B	21–22–23–24–25–26–27–28–29–30
C	41–42–43–44–45–46–47–48–49–50
D	61–62–63–64–65–66–67–68–69–70
E	81–82–83–84–85–86–87–88–89–90
F	101–102–103–104–105–106–107–108–109–110
G	121–122–123–124–125–126–127–128–129–130
H	141–142–143–144–145–146–147–148–149–150
I	161–162–163–164–165–166–167–168–169–170
J	181–182–183–184–185–186–187–188–189–190
K	201–202–203–204–205–206–207–208–209–210
L	221–222–223–224–225–226–227–228–229–230
M	241–242–243–244–245–246–247–248–249–250
N	261–262–263–264–265–266–267–268–269–270
O	281–282–283–284–285–286–287–288–289–290
P	301–302–303–304–305–306–307–308–309–310
Q	321–322–323–324–325–326–327–328–329–330
R	341–342–343–344–345–346–347–348–349–350
S	361–362–363–364–365–366–367–368–369–370
T	381–382–383–384–385–386–387–388–389–390

(b) *U.S./Canada border area.* The following criteria shall govern the assignment of frequency pairs (channels) in the 806–821/851–866 and 896–901/935–940 MHz bands for stations located in the U.S./Canada border area. These channels are available for assignment for conventional or trunked systems in accordance with all applicable sections of this subpart. They are available for intercategory sharing as indicated in § 90.621(g). Specific provisions for use of the 821–824/866–869 MHz bands in the U.S./Canada border area are contained in paragraph (c) of this section, and provisions for use of the 896–901/935–940 MHz bands in the U.S./Canada border

are contained in paragraph (d) of this section.

(1) The U.S./Canada border area is divided into eight geographical regions with U.S. channel allocations shown in table 5.

TABLE 5—GEOGRAPHICAL REGIONS

Region	Location (longitude)	U.S. channel allocation
1	66° W–71° W (0–100 km from border) ..	300
2	71° W–81° W (0–100 km from border) ..	180
3	81° W–85° W (0–100 km from border) ..	420
4	85° W–121° –30' W (0–100 km from border).	300
5	121°–30' W 127° W(0–140 km from border).	300
6	127° W–143° W (0–100 km from border).	300
7	66° W–121° –30' W (100–140 km from border).	600
8	127° W–143° W (100–140 km from border).	600

(2) Station authorizations in Regions 1–4 and Regions 6–8 will be subject to Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations as indicated in table 6. Stations in Region 5 will be subject to the ERP and antenna height above mean sea level limitations in table 8. Effective Radiated Power (ERP) is defined as the product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction. Effective Antenna Height is calculated by subtracting the Assumed Average Terrain Elevation (AATE) given in table 7 from the antenna height above mean sea level.

TABLE 6—LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO EFFECTIVE ANTENNA HEIGHTS (EAH) OF BASE STATIONS IN REGIONS 1, 2, 3, 4, 6, 7, 8

Feet	Meters	Watts (maximum)
0–500	0–152	500
501–1000	153–305	125
1001–1500	306–457	40
1501–2000	458–609	20
2001–2500	610–762	10
2501–3000	763–914	10
3001–3500	915–1066	6
3501–4000	1067–1219	5
Above 4000	Above 1219	5

Table 7. Values of Assumed Average Terrain Elevation (AATE)
Along the U.S./Canada Border

Longitude (θ) (°West)	Latitude (θ) (°North)	Assumed Average Terrain Elevation	
		Feet	Meters
$65 \leq \theta < 69$	$\theta < 45$	0	0
"	$45 \leq \theta < 46$	300	91
"	$\theta \geq 46$	1000	305
$69 \leq \theta < 73$	all	2000	609
$73 \leq \theta < 74$	"	500	152
$74 \leq \theta < 78$	"	250	76
$78 \leq \theta < 80$	$\theta < 43$	250	76
"	$\theta \geq 43$	500	152
$80 \leq \theta < 90$	all	600	183
$90 \leq \theta < 98$	"	1000	305
$98 \leq \theta < 102$	"	1500	457
$102 \leq \theta < 108$	"	2500	762
$108 \leq \theta < 111$	"	3500	1066
$111 \leq \theta < 113$	"	4000	1219
$113 \leq \theta < 114$	"	5000	1524
$114 \leq \theta < 121.5$	"	3000	914
$121.5 \leq \theta < 127$	"	0	0
↑	$54 \leq \theta < 56$	0	0
$\theta \geq 127$	$56 \leq \theta < 58$	500	152
(Alaska - British Columbia/Yukon Territory Border)	$58 \leq \theta < 60$	0	0
↓	$60 \leq \theta < 62$	4000	1219
	$62 \leq \theta < 64$	1600	488
	$64 \leq \theta < 66$	1000	305
	$66 \leq \theta < 68$	750	228
	$68 \leq \theta < 69.5$	1500	457
	$\theta \geq 69.5$	0	0

TABLE 8—LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO ANTENNA HEIGHTS ABOVE MEAN SEA LEVEL OF BASE STATIONS IN REGION 5

Antenna height above mean sea level		ERP watts (maximum)
Feet	Meters	
0 to 1,650	0 to 503	500
1,651 to 2,000	504 to 609	350
2,001 to 2,500	610 to 762	200
2,501 to 3,000	763 to 914	140
3,001 to 3,500	915 to 1,066	100
3,501 to 4,000	1,067 to 219	75
4,001 to 4,500	1,220 to 1,371	70
4,501 to 5,000	1,372 to 1,523	65
Above 5,000	Above 1,523	5

(3) The following frequency bands are available in each Region with the exception of those listed in § 90.619(b)(5).

Region(s)	Frequency bands (MHz)
1, 4, 5, 6	806.00–809.75/851.00–854.75 and 817.25–821.00/862.25–866.00.

Region(s)	Frequency bands (MHz)
2	806.00–808.25/851.00–853.25 and 818.75–821.00/863.75–866.00.
3	806.00–811.25/851.00–856.25 and 815.75–821.00/860.75–866.00.
7, 8	806.00–821.00/851.00–866.00.

(4) Coordination with Canada will be required:

(i) For frequencies in the 808.2625–809.7375/853.2625–854.7375 MHz and 817.2625–818.7375/862.2625–863.7375 MHz bands, for stations to be located in the geographical area in Region 1 enclosed by the United States border, the meridian 71° W and the line beginning at the intersection of 44°25'N, 71° W, then running by great circle arc to the intersection of 45° N, 70° W, then North along meridian 70° W to the intersection of 45°45'N, then running West along 45°45'N to the intersection of the United States–Canada border.

(ii) For frequencies in the 808.2625–811.2375/853.2625–856.2375 MHz and 815.7625–818.7375/860.7625–863.7375 MHz bands, for stations to be located in the geographical area in Region 3 enclosed by the meridian 81° W longitude, the arc of a circle of 100 km radius centered at the intersection of 81° W longitude and the northern shore of Lake Erie and drawn clockwise from the southerly intersection with 81° W longitude to intersect the United States-Canada border, and the United States-Canada border.

(5) Applicants requesting authorizations in the frequency bands in the geographical areas listed below shall submit documentation indicating compliance with the following protection criteria to the indicated Canadian television station. Protection to Canadian

television assignments and allotments is based on the field strength of an interfering mobile radio signal at the TV station's calculated Grade B contour (64 dBu) not exceeding the TV field strength by more than 20 dB (i.e., 84 dBu). The field strength of the TV assignment or allotment is calculated using the R6602 [F(50,50)] propagation curves and any land mobile base station interfering signal is calculated using the R6602 [F(50,10)] propagation curves at a receiving effective antenna height of 9.1 meters (30 feet). Where the calculated field strength of the TV assignment or allotment exceeds the Grade B contour value of 64 dBu at the Canada/U.S.A. border, the land mobile radio signal may not exceed the actual calculated TV field strength at the border by more than 20 dB.

Frequency bands (MHz)	Areas
852–853.25 MHz (Cornwall—TV Channel 63).	Area bounded by a line joining, clockwise, the following coordinates: starting at point 45°00'00" N. Lat., 74°38'00" W. Long., moving east along the Canada/USA border to point 44°59'30" N. Lat., 74°05'00" W. Long., moving south west to point 44°56'30" N. Lat., 74°08'00" W. Long. moving west to point 45°00'00" N. Lat., 74°38'00" W. Long. The second area is bounded by a line joining, clockwise, the following coordinates: 44°50'30" N. Lat., 75°17'30" W. Long., moving east along the Canada/USA border to point 44°55'30" N. Lat., 75°05'00" W. Long., moving south to point 44°55'00" N. Lat., 75°05'00" W. Long., moving south west to point 44°53'00" N. Lat., 75°06'30" W. Long., moving south west to point 44°48'30" N. Lat., 75°14'30" W. Long., and moving north west to point 44°50'30" N. Lat., 75°17'30" W. Long.
852–854.75 MHz (Vancouver—TV Channel 63).	Area bounded by a line joining, clockwise, the following coordinates: starting at point 49°00'00" N. Lat., 122°45'30" W. Long., moving east along the Canada/USA border to point 49°00'00" N. Lat., 122°05'00" W. Long., moving south west to point 48°57'30" N. Lat., 122°09'00" W. Long., moving west to point 48°59'00" N. Lat., 122°44'30" W. Long., and moving north to point 49°00'00" N. Lat., 122°45'30" W. Long.

(6) [Reserved]

(7) Frequencies in Regions 1–8 are designated in accordance with the following:

(i) As shown in § 90.613, mobile and control station transmitting frequencies will commence with Channel No. 1 at 806.0125 MHz, followed by Channel No. 2 at 806.0375 MHz and proceed with uniform 25 kHz spacing to the band end, with Channel No. 600 at 820.9875 MHz. Corresponding base station frequencies, separated by 45 MHz from the mobile control frequencies, will commence with Channel No. 1 at 851.0125 MHz and end with Channel No. 600 at 865.9875 MHz.

(ii) Channels will be arranged into 5-channel groups. Because of the distribution and differing number of channels available for United States use in

Regions 1–8, channel spacing between channels in a 5-channel group vary as follows:

Region	Number of 5-channel groups	Spacing between channels in a 5-channel group (Channels)
1, 4, 5, 6	60	30
2	36	18
3	80	40
7, 8	120	40

¹ Region 3 also has ten (10) contiguous channels in each of the two allocated sub-bands.

(iii) The Public Safety Category consists of those entities eligible in the Public Safety Pool of subpart B of this part. The Industrial/Land Transportation Category consists of Power, Petroleum, Forest Products, Film and Video Production, Relay Press, Special

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Industrial, Manufacturers, Telephone Maintenance, Motor Carrier, Railroad, Taxicab, and Automobile Emergency licensees (as defined in §90.7). The Business Radio Category consists of those entities eligible in the Industrial/Business Pool of subpart C of this part. Specialized Mobile Radio Systems (SMRS) will not be authorized in any of the above mentioned categories, but only in the SMRS category to those applicants eligible under §90.603(c).

(8) Tables 9, 10, 11, and 12 list the channels available in Regions 1, 4, 5, and 6 for the categories of users indicated. Frequencies are given in §90.613.

TABLE 9—PUBLIC SAFETY CATEGORY—85 CHANNELS
[Regions 1, 4, 5, 6]

Group No.	Channel No.
1	1-31-61-91-121
2	2-32-62-92-122
3	3-33-63-93-123
4	4-34-64-94-124
5	5-35-65-95-125
6	6-36-66-96-126
7	7-37-67-97-127
8	8-38-68-98-128
9	9-39-69-99-129
10	10-40-70-100-130
11	11-41-71-101-131
12	12-42-72-102-132
13	13-43-73-103-133
14	14-44-74-104-134
15	15-45-75-105-135
16	16-46-76-106-136
17	17-47-77-107-137

TABLE 10—INDUSTRIAL/LAND TRANSPORTATION CATEGORY—60 CHANNELS
[Regions 1, 4, 5, 6]

Group No.	Channel No.
18	18-48-78-108-138
19	19-49-79-109-139
20	20-50-80-110-140
21	21-51-81-111-141
22	22-52-82-112-142
23	23-53-83-113-143
24	24-54-84-114-144
25	25-55-85-115-145
26	26-56-86-116-146
27	27-57-87-117-147
28	28-58-88-118-148
29	29-59-89-119-149

TABLE 11—BUSINESS CATEGORY—60 CHANNELS
[Regions 1, 4, 5, 6]

Group No.	Channel No.
451	451-481-511-541-571
452	452-482-512-542-572

TABLE 11—BUSINESS CATEGORY—60 CHANNELS—Continued
[Regions 1, 4, 5, 6]

Group No.	Channel No.
453	453-483-513-543-573
454	454-484-514-544-574
455	455-485-515-545-575
456	456-486-516-546-576
457	457-487-517-547-577
458	458-488-518-548-578
459	459-489-519-549-579
460	460-490-520-550-580
461	461-491-521-551-581
462	462-492-522-552-582

TABLE 12—SMR AND GENERAL CATEGORIES—95 CHANNELS
(Regions 1, 4, 5, 6)

	Spectrum block Channel Nos.
EA-Based SMR Category (90 Channels)	
A	None.
B	463 through 480.
C	493 through 510, 523 through 540, 553 through 570, 583 through 600.
General Category (5 Channels)	
G through V	None.
D	30.
E	60 and 90.
F	120 and 150.

(9) Tables 13, 14 15, and 16 list the frequencies available in Region 2 for the categories of users indicated.

TABLE 13—PUBLIC SAFETY CATEGORY—50 CHANNELS
[Region 2]

Group No.	Channel Nos.
1	1-19-37-55-73
2	2-20-38-56-74
3	3-21-39-57-75
4	4-22-40-58-76
5	5-23-41-59-77
6	6-24-42-60-78
7	7-25-43-61-79
8	8-26-44-62-80
9	9-27-45-63-81
10	10-28-46-64-82

TABLE 14—INDUSTRIAL/LAND TRANSPORTATION CATEGORY—35 CHANNELS
[Region 2]

Group No.	Channel Nos.
11	11-29-47-65-83
12	12-30-48-66-84
13	13-31-49-67-85
14	14-32-50-68-86
15	15-33-51-69-87

TABLE 14—INDUSTRIAL/LAND TRANSPORTATION
CATEGORY—35 CHANNELS—Continued
[Region 2]

Group No.	Channel Nos.
16	16–34–52–70–88
17	17–35–53–71–89

TABLE 15—BUSINESS CATEGORY—35
CHANNELS
[Region 2]

Group No.	Channel Nos.
511	511–529–547–565–583
512	512–530–548–566–584
513	513–531–549–567–585
514	514–532–550–568–586
515	515–533–551–569–587
516	516–534–552–570–588
517	517–535–553–571–589

TABLE 16—SMR AND GENERAL CATEGORIES—
60 CHANNELS
(Region 2)

Spectrum block	Channel Nos.
SMR Category (55 Channels)	
A	None.
B	None.
C	518 through 528, 536 through 546, 554 through 564, 572 through 582, 590 through 600.
G through V	None.
General Category (5 Channels)	
D 18 and 36..	
E	54–72–90.
F	None.

(10) Tables 17, 18, 19, and 20 list the frequencies available in Region 3 for the categories of users indicated.

TABLE 17—PUBLIC SAFETY—115 CHANNELS
[Region 3]

Group No.	Channel Nos.
1	1–41–81–121–161
2	2–42–82–122–162
3	3–43–83–123–163
4	4–44–84–124–164
5	5–45–85–125–165
6	6–46–86–126–166
7	7–47–87–127–167
8	8–48–88–128–168
9	9–49–89–129–169
10	10–50–90–130–170
11	11–51–91–131–171
12	12–52–92–132–172
13	13–53–93–133–173
14	14–54–94–134–174
15	15–55–95–135–175
16	16–56–96–136–176
17	17–57–97–137–177

TABLE 17—PUBLIC SAFETY—115 CHANNELS—
Continued
[Region 3]

Group No.	Channel Nos.
18	18–58–98–138–178
19	19–59–99–139–179
20	20–60–100–140–180
21	21–61–101–141–181
22	22–62–102–142–182
Contiguous channels	201, 202, 203, 204, 205

TABLE 18—INDUSTRIAL/LAND TRANSPORTATION
CATEGORY—85 CHANNELS
[Region 3]

Group No.	Channel Nos.
23	23–63–103–143–183
24	24–64–104–144–184
25	25–65–105–145–185
26	26–66–106–146–186
27	27–67–107–147–187
28	28–68–108–148–188
29	29–69–109–149–189
30	30–70–110–150–190
31	31–71–111–151–191
32	32–72–112–152–192
33	33–73–113–153–193
34	34–74–114–154–194
35	35–75–115–155–195
36	36–76–116–156–196
37	37–77–117–157–197
Contiguous channels	391, 392, 393, 394, 395, 396, 397, 398, 399, 400

TABLE 19—BUSINESS CATEGORY—85
CHANNELS
[Region 3]

Group No.	Channel Nos.
401	401–441–481–521–561
402	402–442–482–522–562
403	403–443–483–523–563
404	404–444–484–524–564
405	405–445–485–525–565
406	406–446–486–526–566
407	407–447–487–527–567
408	408–448–488–528–568
409	409–449–489–529–569
410	410–450–490–530–570
411	411–451–491–531–571
412	412–452–492–532–572
413	413–453–493–533–573
414	414–454–494–534–574
415	415–455–495–535–575
416	416–456–496–536–576
Contiguous channels	206, 207, 208, 209, 210

TABLE 20—SMR AND GENERAL CATEGORIES
(135 CHANNELS)
(Region 3)

Spectrum block	Channel Nos.
SMR Category (120 Channels)	
A	417 through 420.
B	421 through 440, 457 through 480.

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TABLE 20—SMR AND GENERAL CATEGORIES
(135 CHANNELS)—Continued
(Region 3)

Spectrum block	Channel Nos.
C	497 through 520, 537 through 560, 577 through 600.
General Category (15 Channels)	
G through V	None.
D	38–39–40–158–159.
E	78–79–80–160–198.
F	118–119–120–199–200.

(11) Tables 21, 22, 23, and 24 list the frequencies available in Regions 7 and 8 for the categories of users indicated.

TABLE 21—(REGIONS 7, 8) PUBLIC SAFETY
CATEGORY—170 CHANNELS

Group No.	Channel Nos.
1	1–41–81–121–161
2	2–42–82–122–162
3	3–43–83–123–163
4	4–44–84–124–164
5	5–45–85–125–165
6	6–46–86–126–166
7	7–47–87–127–167
8	8–48–88–128–168
9	9–49–89–129–169
10	10–50–90–130–170
11	11–51–91–131–171
12	12–52–92–132–172
13	13–53–93–133–173
14	14–54–94–134–174
15	15–55–95–135–175
16	16–56–96–136–176
17	17–57–97–137–177
18	18–58–98–138–178
19	19–59–99–139–179
20	20–60–100–140–180
21	21–61–101–141–181
22	22–62–102–142–182
23	23–63–103–143–183
24	24–64–104–144–184
25	25–65–105–145–185
26	26–66–106–146–186
27	27–67–107–147–187
28	28–68–108–148–188
29	29–69–109–149–189
30	30–70–110–150–190
31	31–71–111–151–191
32	32–72–112–152–192
33	33–73–113–153–193
34	34–74–114–154–194

TABLE 22—(REGIONS 7, 8) INDUSTRIAL/LAND
TRANSPORTATION CATEGORY—120 CHANNELS

Group No.	Channel Nos.
201	201–241–281–321–361
202	202–242–282–322–362
203	203–243–283–323–363
204	204–244–284–324–364
205	205–245–285–325–365
206	206–246–286–326–366
207	207–247–287–327–367

TABLE 22—(REGIONS 7, 8) INDUSTRIAL/LAND
TRANSPORTATION CATEGORY—120 CHAN-
NELS—Continued

Group No.	Channel Nos.
208	208–248–288–328–368
209	209–249–289–329–369
210	210–250–290–330–370
211	211–251–291–331–371
212	212–252–292–332–372
213	213–253–293–333–373
214	214–254–294–334–374
215	215–255–295–335–375
216	216–256–296–336–376
217	217–257–297–337–377
218	218–258–298–338–378
219	219–259–299–339–379
220	220–260–300–340–380
221	221–261–301–341–381
222	222–262–302–342–382
223	223–263–303–343–383
224	224–264–304–344–384

TABLE 23—(REGIONS 7, 8) BUSINESS
CATEGORY—120 CHANNELS

Group No.	Channel Nos.
401	401–441–481–521–561
402	402–442–482–522–562
403	403–443–483–523–563
404	404–444–484–524–564
405	405–445–485–525–565
406	406–446–486–526–566
407	407–447–487–527–567
408	408–448–488–528–568
409	409–449–489–529–569
410	410–450–490–530–570
411	411–451–491–531–571
412	412–452–492–532–572
413	413–453–493–533–573
414	414–454–494–534–574
415	415–455–495–535–575
416	416–456–496–536–576
417	417–457–497–537–577
418	418–458–498–538–578
419	419–459–499–539–579
420	420–460–500–540–580
421	421–461–501–541–581
422	422–462–502–542–582
423	423–463–503–543–583
424	424–464–504–544–584

TABLE 24—(REGIONS 7, 8) SMR AND GENERAL
CATEGORIES—190 CHANNELS

Spectrum block	Channel Nos.
SMR Category (172 Channels)	
A	389 through 400
B	425 through 440, 465 through 480
C	505 through 520, 545 through 560, 585 through 600
G	155–229–269–309–349
H	156–230–270–310–350
I	157–231–271–311–351
J	158–232–272–312–352
K	159–233–273–313–353
L	160–234–274–314–354

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TABLE 24—(REGIONS 7, 8) SMR AND GENERAL CATEGORIES—190 CHANNELS—Continued

Spectrum block	Channel Nos.
M	195–235–275–315–355
N	196–236–276–316–356
O	197–237–277–317–357
P	198–238–278–318–358
Q	199–239–279–319–359
R	200–240–280–320–360
S	225–265–305–345–385
T	226–266–306–346–386
U	227–267–307–347–387
V	228–268–308–348–388
General Category (18 Channels)	
D	35 through 40
E	75 through 80
F	115 through 120

(c) *Use of frequencies in the 821–824/866–869 MHz band (Channels 601–830) in the U.S./Canada border area.* The following criteria shall govern the assignment of frequency pairs (channels) in the 821–824/866–869 MHz band for stations located in the U.S./Canada border area. They are available for assignments for conventional or trunked systems in accordance with applicable sections of this subpart and the Report and Order in Gen. Docket No. 87–112. They are not available for intercategory sharing.

(1) Channels 601–830, as listed in § 90.613 table of 806–824/851–869 MHz Channel Designations, are available to eligible applicants in the Public Safety Category for use in the U.S./Canada border area as shown in table 25. Additionally, Channels 601, 639, 677, 715, and 753 are available in all regions only for mutual aid purposes.

TABLE 25—CHANNELS IN THE 821–824/866–869 MHz FREQUENCY BANDS AVAILABLE IN THE U.S./CANADA BORDER AREA

Region	Location (longitude)	Channels
1	66° W–71° W (0–100 km from border)	715–830
2	71° W–80°30' W (0–100 km from border)	760–830
3	80°30' W–85° W (0–100 km from border)	636–830
4	85° W–121°30' W (0–100 km from border).	715–830
5	121°30' W–127° W (0–140 km from border).	715–830
6	127° W–143° W (0–100 km from border)	715–830
7	66° W–121°30' W (100–140 km from border).	601–830

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TABLE 25—CHANNELS IN THE 821–824/866–869 MHz FREQUENCY BANDS AVAILABLE IN THE U.S./CANADA BORDER AREA—Continued

Region	Location (longitude)	Channels
8	127° W–143° W (100–140 km from border).	601–830

Note: For assignments in the 821–824/866–869 MHz bands, the cities of Akron, Ohio (41°05'00" N, 81°30'40" W) and Youngstown, Ohio (41°05'57" N, 80°39'02" W) are considered outside of Region 3, and Syracuse, New York (43°03'04" N, 76°09'14" W) is considered outside of Region 2. These cities are defined as an area with the given center coordinates and encompassing a circle of 30 km radius.

(2) All frequency assignments made pursuant to paragraph (c)(1) of this section shall comply with the requirements of § 90.619(b)(2).

(3) In Region 5, Channels 601–714 may be authorized in the United States under the following conditions:

(i) An assignment may be made if the predicted power flux density (PFD) of a proposed station's signal does not exceed -107 dBW/m² at the border. The prediction of the PFD is calculated based upon a modified Longley-Rice point-to-point propagation model with time and location variabilities of 10 percent¹ and 3-second digitized terrain data.²

¹G.A. Hufford, A.G. Longley, and W.A. Kissick, *A guide to the use of the ITS irregular terrain model in the area prediction mode*, NTIA Report 82–100. (Available from U.S. Department of Commerce, National Technical and Information Service (NTIS), Springfield, VA 22161. Accession number PB–217977.)

A.G. Longley and P.L. Rice, *Prediction of tropospheric radio transmission loss over irregular terrain—a computer method 1968*, ESSA Technical Report ERL 79–ITS 67. (Available from NTIS, Accession number AD–676–874.)

P.L. Rice, A.G. Longley, K.A. Norton, and A.P. Barsis, *Transmission loss predictions for tropospheric communication circuits*, National Bureau of Standards Technical Note 101, Volumes I and II. (Available from NTIS, Accession numbers AD–687–820 and AD–687–821.)

²*Level 1-Digital Terrain Elevation Data*, United States Defense Mapping Agency. (Available from National Cartographic Information Center, U.S. Geological Survey, 507 National Center, Reston, VA 22092 as *Digital Elevation Model Data* in 1°×1° units. Two of these units are required to cover each 1°×2° map (1:250,000-scale quadrangle) from which the data were produced.

(ii) Authorizations for Channels 601–714 in Region 5 are secondary to Canadian operations and conditioned to require that licensees take immediate action to eliminate any harmful interference resulting from the station's transmitted signal exceeding -107 dBW/m² at or beyond the U.S./Canada border.

(4) Channel assignments for stations to be located in the geographical area in Region 1 enclosed by the United States-Canada border, the meridian 71°W and the line beginning at the intersection of 44°25' N, 71° W, then running by great circle arc to the intersection of 45° N, 70° W, then North along meridian 70° W to the intersection of 45°45' N, then running West along 45°45' N to the intersection of the United States-Canada border, will be only for even numbered channels beginning with Channel 716 and ending with Channel 758.

(5) Channel assignments for stations to be located in the geographical area in Region 3 enclosed by the meridian 81° W longitude, the arc of a circle of 100 km radius centered at 42°39'30" N latitude 81° W longitude at the northern shore of Lake Erie and drawn clockwise from the southerly intersection with 80°30' W longitude to intersect the United States-Canada border West of 81° W, and the United States-Canada border, will be only for even numbered channels beginning with Channel 636 and ending with Channel 758. Coordination with Canada will be required for these channels. U.S. stations must protect Canadian stations operating on channels 636 through 758 within an area of 30 km radius from the center city coordinates of London, Ontario (42°59' N, 81°14' W).

(6) *Additional channels available.*—The channels listed in table 26 are available for assignment in Regions 1–6 if the maximum power flux density (PFD) of the station's transmitted signal does not exceed the limits specified in tables 27 and 28. The spreading loss shall be calculated using the free space formula taking into account an antenna discrimination in the direction of the border.

TABLE 26—ADDITIONAL CHANNELS AVAILABLE
[Regions 1–6]

Region	Channel No.'s	Effective radiated power
1	601–714	See Table 29
2	601–759	See Table 29
3	601–635	See Table 29
4	601–714	See Table 29
5	601–714	See Table 30
6	601–714	See Table 29

Authorizations for stations using these channels will be secondary to Canadian operations and conditioned to require that licensees take immediate action to eliminate any harmful interference resulting from the station's transmitted signal exceeding the values specified in tables 29 or 30 at or beyond the U.S./Canada border.

(d) *Use of frequencies in the 896–901/935–940 MHz band (Channels 1–399) in the U.S./Canada border area.* The following criteria shall govern the assignment of frequency pairs (channels) in the 896–901/935–940 MHz band for stations located in the U.S./Canada border area. They are available for assignments for conventional or trunked systems in accordance with applicable sections of this subpart.

(1) Channels 1–399, as listed in § 90.613 table of 896–901/935–940 MHz Channel Designations, are available to eligible applicants for use in the U.S./Canada border area as shown in table 27. Additionally, Channels 71, 75, 79, 151, 155, and 159 are available in all regions only for implementation of an Advanced Train Control System as defined in 3 FCC Rcd 427 (1988) (Advanced Train Control Waiver).

TABLE 27—CHANNELS IN THE 896–901/935–940 MHz FREQUENCY BANDS AVAILABLE IN THE U.S./CANADA BORDER AREA

Region	Location (longitude)	Channels
1	66° W–71° W. (0–100 km from border) ...	1–200, 398, 399
2	71° W–80°30' W (0–100 km from border)	1–120
3	80°30' W–85° W (0–100 km from border)	1–340
4	85° W–121°30' W (0–100 km from border).	1–200, 398, 399
5	121°30' W–127° W (0–140 km from border).	1–200, 398, 399
6	127° W–143° W (0–100 km from border)	1–200, 398, 399

TABLE 27—CHANNELS IN THE 896–901/935–940 MHz FREQUENCY BANDS AVAILABLE IN THE U.S./CANADA BORDER AREA—Continued

Region	Location (longitude)	Channels
7	66° W–121°30' W (100–140 km from border).	1–399
8	127° W–143° W (100–140 km from border).	1–399

Note: For assignments in the 896–901/935–940 MHz bands, the cities of Akron, Ohio (41°05'00" N, 81°30'40" W) and Youngstown, Ohio (41°05'57" N, 80°39'02" W) are considered outside of Region 3, and Syracuse, New York (43°03'04" N, 76°09'14" W) is considered outside of Region 2. These cities are defined as an area with the given center coordinates and encompassing a circle of 30 km radius.

(2) All frequency assignments made pursuant to paragraph (d)(1) of this section shall comply with the requirements of § 90.619(b)(2).

(3) In Region 5, Channels 201–397 may be authorized in the United States under the following conditions:

(i) An assignment may be made if the predicted power flux density (PFD) of a proposed station's signal does not exceed -107 dBW/m² at the border. The prediction of the PFD is calculated based upon a modified Longley-Rice point-to-point propagation model with time and location variabilities of 10 percent³ and 3-second digitized terrain data⁴.

(ii) Authorizations for Channels 201–397 in Region 5 are secondary to Canadian operations and conditioned to require that licensees take immediate action to eliminate any harmful interference resulting from the station's transmitted signal exceeding -107 dBW/m² at or beyond the U.S./Canada border.

(4) Channel assignments for stations to be located in the geographical area in Region 1 enclosed by the United States-Canada border, the meridian 71° W and the line beginning at the intersection of 44°25' N, 71° W, then running by great circle arc to the intersection of 45° N, 70° W, then North along meridian 70° W to the intersection of 45°45' N, then running West along 45°45' N to the intersection of the United States-Canada border, will be only for channels 121 through 160, inclusive, and will be limited to assignments with 11 kHz or less necessary bandwidth. Coordination

with Canada will be required for these channels.

(5) Channel assignments for stations to be located in the geographical area in Region 3 enclosed by the meridian of 81° W longitude, the arc of a circle of 100 km radius centered at 42°39'30" N latitude and 81° W longitude at the northern shore of Lake Erie and drawn clockwise from the southerly intersection with 80°30' W longitude to intersect the United States-Canada border West of 81° W, and the United States-Canada border, will be only for channels 121 through 230, inclusive, and will be limited to assignments with 11 kHz or less necessary bandwidth. Coordination with Canada will be required for these channels. U.S. stations must protect Canadian stations operating on channels 121 through 230 within an area of 30 km radius from the center city coordinates of London, Ontario (42°59' N, 81° 14' W).

(6) *Additional channels available*—The channels listed in table 28 are available for assignment in Regions 1–6 if the maximum power flux density (PFD) of the station's transmitted signal does not exceed the limits specified in tables 29 and 30. The spreading loss shall be calculated using the free space formula taking into account any antenna discrimination in the direction of the border.

TABLE 28—ADDITIONAL CHANNELS AVAILABLE
[Regions 1–6]

Region	Channel No.'s	Effective radiated power
1	201–397	See Table 29
2	121–399	See Table 29
3	341–399	See Table 29
4	201–397	See Table 29
5	201–397	See Table 30
6	201–397	See Table 29

Authorizations for stations using these channels will be secondary to Canadian operations and conditioned to require that licensees take immediate action to eliminate any harmful interference resulting from the station's transmitted signal exceeding the values specified in tables 29 or 30 at or beyond the U.S./Canada border.

³See note 1, paragraph (c) of this section.

⁴See note 2, paragraph (c) of this section.

TABLE 29—MAXIMUM POWER FLUX DENSITY (PFD) AT THE U.S./CANADA BORDER CORRESPONDING TO EFFECTIVE ANTENNA HEIGHT [Regions 1, 2, 3, 4, and 6]

Effective antenna height (EAH)		PFD (dBW/ m ²)
Feet	Meters	
0–500	0–152	–84
501–1000	153–305	–90
1001–1500	306–457	–95
1501–2000	458–609	–98
2001–2500	610–762	–101
2501–3000	763–914	–101
3001–3500	915–1066	–103
3501–4000	1067–1219	–104
Above 4000	Above 1219	–104

TABLE 30—MAXIMUM POWER FLUX DENSITY (PFD) AT THE U.S./CANADA BORDER CORRESPONDING TO ANTENNA HEIGHT ABOVE MEAN SEA LEVEL [Region 5]

Antenna height above mean sea level		PFD (dBW/ m ²)
Feet	Meters	
0–1650	0–503	–87.0
1651–2000	504–609	–88.5
2001–2500	610–762	–91.0
2501–3000	763–914	–92.5
3001–3500	915–1066	–94.0
3501–4000	1067–1219	–95.0
4001–4500	1220–1371	–95.5
4501–5000	1372–1523	–96.0
Above 5000	Above 1523	–107.0

(Secs. 4(i) and 303, Communications Act, as amended, and 5 U.S.C. 553 (b)(3)(B) and (d)(1))

[47 FR 41032, Sept. 16, 1982; 47 FR 41045, Sept. 16, 1982; 47 FR 51883, Nov. 18, 1982, as amended at 48 FR 51928, Nov. 15, 1983; 49 FR 22094, May 25, 1984; 50 FR 12261, Mar. 28, 1985; 52 FR 3662, Feb. 5, 1987; 55 FR 42571, Oct. 22, 1990; 56 FR 41469, Aug. 21, 1991; 57 FR 55146, Nov. 24, 1992; 58 FR 31476, June 3, 1993; 58 FR 44963, Aug. 25, 1993; 59 FR 31558, June 20, 1994; 60 FR 48918, Sept. 21, 1995; 61 FR 6156, Feb. 16, 1996; 61 FR 6577, Feb. 21, 1996; 62 FR 18935, Apr. 17, 1997; 62 FR 41214, July 31, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, §90.619 was amended by revising paragraph (b)(7)(iii), the first sentences of paragraphs (a)(1) and (a)(3), and the second sentences of paragraphs (a)(2) and (a)(4), effective Oct. 17, 1997.

§90.621 Selection and assignment of frequencies.

(a) Applicants for frequencies in the Public Safety, Industrial/Land Transportation, and Business Categories must specify on the application the frequencies on which the proposed system will operate pursuant to a rec-

ommendation by the applicable frequency coordinator. Applicants for frequencies in the SMR Category must request specific frequencies by including in their applications the frequencies requested.

(1) For trunked systems, the assignment of frequencies will be made in accordance with applicable loading criteria and in accordance with the following:

(i) Channels will be chosen and assigned in accordance with §§90.615, 90.617, or 90.619.

(ii) A mobile station is authorized to transmit on any frequency assigned to its associated base station.

(iii) There are no limitations on the number of frequencies that may be trunked. Authorizations for non-SMR stations may be granted for up to 20 trunked frequency pairs at a time in accordance with the frequencies listed in §§90.615, 90.617, and 90.619.

(2) For conventional systems the assignment of frequencies will be made in accordance with applicable loading criteria. Accordingly, depending upon the number of mobile units to be served, an applicant may either be required to share a channel, or, if an applicant shows a sufficient number of mobile units to warrant the assignment of one or more channels for its exclusive use, it may be licensed to use such channel or channels on an unshared basis in the area of operation specified in its application.

(i) Channels will be chosen and assigned in accordance with §§90.615, 90.617, or 90.619.

(ii) A mobile station is authorized to transmit on any frequency assigned to its associated base station.

(b) Stations authorized on frequencies listed in this subpart, except for those stations authorized pursuant to paragraph (g) of this section and EA-based and MTA-based SMR systems, will be afforded protection solely on the basis of fixed distance separation criteria. For Channel Blocks A, through V, as set forth in §90.917(d), the separation between co-channel systems will be a minimum of 113 km (70 mi) with one exception. For incumbent licensees in Channel Blocks D through V, that have received the consent of all affected parties to utilize an 18 dBμV/m

signal strength interference contour (see §90.693), the separation between co-channel systems will be a minimum of 173 km (107 mi). The following exceptions to these separations shall apply:

(1) Except as indicated in paragraph (b)(4) of this section, no station in Channel Blocks A through V shall be less than 169 km (105 mi) distant from a co-channel station that has been granted channel exclusivity and authorized 1 kW ERP on any of the following mountaintop sites: Santiago Peak, Sierra Peak, Mount Lukens, Mount Wilson (California). Except as indicated in paragraph (b)(4) of this section, no incumbent licensee in Channel Blocks D through V that have received the consent of all affected parties to utilize an 18 dBµV/m signal strength interference contour shall be less than 229 km (142 mi) distant from a co-channel station that has been granted channel exclusivity and authorized 1 kW ERP on any of the following mountaintop sites: Santiago Peak, Sierra Peak, Mount Lukens, Mount Wilson (California).

(2) The separation between co-channel stations that have been granted ex-

clusivity and that are located at high sites in California north of 35° N Latitude and west of 118° W Longitude shall be determined as follows:

(i) Required co-channel separations between common antenna sites are given by table 1. A channel group assigned to a station on a site listed in the vertical column may not be re-assigned to a station on a site listed in the horizontal column if there is an "X" in the box created by the intersection of the vertical and horizontal lines. The geographic coordinates listed in the table represent an average for each particular site; all locations within 1.6 km (1 mi) of the coordinates will be considered to be at that site.

(ii) Required co-channel separations involving antenna sites not listed in table 1 shall be determined by Commission staff on a case by case basis. The interference potential of proposed assignments will be evaluated considering parameters such as antenna height, effective radiated power, terrain irregularities, and market conditions.

[illegible]

ties to utilize an 18 dBμV/m signal strength interference contour, have been granted channel exclusivity and are located in the State of Washington at the locations listed below shall be separated from co-channel stations by a minimum of 229 km (142 mi). Locations within one mile of the geographical coordinates listed in the table below will be considered to be at that site.

Site name	North latitude	West longitude
Mount Constitution	48–40–48	122–50–24
Lyman Mountain	48–35–42	122–09–35
Cultus Mountain	48–25–31	122–08–54
Gunsite Ridge	48–03–23	121–51–37
Gold Mountain	47–32–52	122–46–52
Buck Mountain	47–47–06	122–59–30
Cougar Mountain	47–32–40	122–06–30
Squak Mountain	47–30–15	122–03–30
Tiger Mountain	47–30–14	121–58–28
Devils Mountain	48–21–53	122–16–02
McDonald Mountain	47–20–12	122–51–26
Maynard Hill	48–00–59	122–55–31
North Mountain	47–19–08	123–20–44
Green Mountain	47–33–41	122–48–27
Capitol Peak	46–58–22	123–08–17
Rattlesnake Mountain	47–28–10	121–49–13
Three Sisters Mountain	47–07–20	121–53–30
Grass Mountain	47–12–15	121–47–38
Spar Pole Hill	47–02–52	122–08–35

(4) Upon an applicant's specific request to the Commission or a frequency coordinator, co-channel stations may be separated by less than 113 km (70 mi) by meeting certain transmitter ERP and antenna height criteria. The following table indicates separations assignable to such co-channel stations for various transmitter power and antenna height combinations. The minimum separation permitted is 88 km (55 mi). Applicants will provide the Commission with a statement that the application is submitted for consideration under the table, a list of all co-channel stations within 113 km (70 mi), and the DHAATs and ERPs for these stations and the applicant's proposed station. Applicants seeking to be licensed for stations located at distances less than those prescribed in the table are required to secure a waiver and must submit with the application, in addition to the above, an interference analysis, based upon any of the generally-accepted terrain-based propagation models, that shows that co-channel stations would receive the same or greater interference protection than provided in the table. Requests for separations less than 88 km (55 mi) must also include an analysis of interference potential from mobile transmitters to existing co-channel base station receivers. Applicants seeking a waiver must submit with their applica-

tion a certificate of service indicating that concurrent with the submission of the application to the Commission or a coordinator, all co-channel licensees within the applicable area were served with a copy of the application and all attachments thereto. Licensees thus served may file an opposition to the application within 30 days from the date the application is filed with the Commission.

(i) The directional height of the antenna above average terrain (DHAAT) is calculated from the average of the antenna heights above average terrain from 3 to 16 km (2 to 10 mi) from the proposed site along a radial extending in the direction of the existing station and the radials 15 degrees to either side of that radial.

(ii) Except for the sites listed in paragraphs (b)(1), (b)(2), and (b)(3) of this section, additional co-channel distance separation must be afforded to an existing station from an applicant wishing to locate a station less than 113 km (70 mi) from a co-channel station, where either the applicant's or the existing station is located at sites with DHAATs of 458 m (1500 ft) and above. The separation between short-spaced co-channel stations shall be determined as follows:

(A) Calculate the DHAAT in each direction between every existing co-channel station with 113 km (70 mi) and the proposed station.

(B) In the table, locate the approximate ERP and DHAAT values for the proposed and existing stations.

(C) When DHAAT values are greater than 458 m (1500 ft), use the required separation for 305 m (1000 ft) and add 1.6 km (1 mi) for every 30.5 km (100 ft), or increment thereof, of DHAAT above 458 m (1500 ft) to the distance indicated in the table. If both the proposed existing stations have DHAATs of 458 m (1500 ft) or more, the additional distance is separately determined for each station and the combined distance is added to the distance obtained from the table. Protection to existing stations will be afforded only up to 113 km (70 mi).

SHORT-SPACING SEPARATION TABLE

Proposed station ERP (watts)/DHAAT(m) ³	Distance between stations (km) ^{1,2}						
	Existing station DHAAT (meters) ³						
	305	215	150	108	75	54	37
1000/305	113	113	113	113	113	113	113
1000/215	113	113	113	113	113	113	110
1000/150	113	113	113	113	112	108	103
1000/108	113	113	113	110	107	103	98
1000/75	113	112	108	103	100	96	91
1000/54	113	109	105	100	97	93	88
1000/37	109	104	100	95	92	88	88
500/305	113	113	113	113	113	113	110
500/215	113	113	113	112	109	105	100
500/150	113	112	108	103	100	96	91
500/108	112	107	103	98	95	91	88
500/75	107	102	98	93	90	88	88
500/54	103	98	94	89	88	88	88
500/37	99	94	90	88	88	88	88
250/305	113	113	113	112	109	105	100
250/215	113	113	107	102	99	95	90
250/150	109	104	100	95	92	88	88
250/108	105	100	96	91	88	88	88
250/75	99	94	90	88	88	88	88
250/54	95	90	88	88	88	88	88
250/37	91	88	88	88	88	88	88
125/305	113	111	107	102	99	95	90
125/215	108	103	99	94	91	88	88
125/150	103	98	94	89	88	88	88
125/108	98	93	89	88	88	88	88
125/75	93	88	88	88	88	88	88
125/54	88	88	88	88	88	88	88
125/37	88	88	88	88	88	88	88
62/305	108	103	99	94	91	88	88
62/215	103	98	94	89	88	88	88
62/150	97	92	88	88	88	88	88
62/108	92	88	88	88	88	88	88
62/75	88	88	88	88	88	88	88
62/54	88	88	88	88	88	88	88
62/37	88	88	88	88	88	88	88

¹ Separations for stations on Santiago Peak, Sierra Peak, Mount Lukens, and Mount Wilson (CA) and the locations in the State of Washington listed in paragraph (b)(3) of this section are 56 km (35 mi) greater than those listed in the table above. In the event of conflict between this table and the table of additional California high elevation sites shown in paragraph (b)(2) of this section, the latter will apply.

² Distances shown are derived from the R-6602 curves and are based upon a non-overlap of the 22 dBu (F50,10) interference contour of the proposed station with the 40 dBu (F50,50) contour of the existing station(s). No consideration is given to the 40 dBu service contour of the proposed station and the 22 dBu contour of the existing station(s). The minimum separation of stations will be 88 km (55 mi).

³ All existing stations are assumed to operate with 1000 watts ERP. When the ERP and/or DHAAT of a proposed station or the DHAAT of an existing station is not indicated in the table, the next higher value(s) must be used.

(5) The separation between co-channel systems may be less than the separations defined above if an applicant submits with its application letters of concurrence indicating that the applicant and each co-channel licensee within the specified separation agree to accept any interference resulting from the reduced separation between their systems. Each letter from a co-channel licensee must certify that the system of the concurring licensee is constructed and fully operational. The applicant must also submit with its application a certificate of service indicating that all concurring co-channel

licensees have been served with an actual copy of the application.

(6) A station located closer than the distances provided in this section to a co-channel station that was authorized as short-spaced under paragraph (b)(4) of this section shall be permitted to modify its facilities as long as the station does not extend its 22 dBu contour beyond its maximum 22 dBu contour (i.e., the 22 dBu contour calculated using the station's maximum power and antenna height at its original location) in the direction of the short-spaced station.

(7) Offset frequencies in the 811–821/856–866 MHz band for use only within U.S./Mexico border area, as designated in § 90.619(a), shall be considered co-channel with non-offset frequencies in this band as designated in § 90.613. New applications for frequencies in this band for stations adjacent to the U.S./Mexico border area must comply with the co-channel separation provisions of this section.

(c) Conventional systems authorized on frequencies in the Public Safety (except for those systems that have participated in a formal regional planning process as described in § 90.16), Industrial/Land Transportation, Business, and Spectrum Block D frequencies in the 800 MHz SMR service (formerly General) Categories which have not met the loading levels necessary for channel exclusivity will not be afforded co-channel protection.

(d) UHF television translator stations using UHF output channels from Channels 70 through 83 operate on a secondary basis to land mobile stations using the UHF bands allocated under this subpart for land mobile use. Accordingly, such television translator stations will not be protected from interference from such authorized land mobile stations.

(e) Frequencies in the 806–821/851–866 MHz bands listed as available for eligibles in the Public Safety, Industrial/Land Transportation, and Business Categories are available for inter-category sharing under the following conditions:

(1) Channels in the Public Safety, Industrial/Land Transportation and Business categories will be available to eligible applicants in those categories only if there are no frequencies in their own category and no public safety systems are authorized on those channels under consideration to be shared.

(2)–(4) [Reserved]

(5) The applicant must submit a statement from its own category coordinator that frequencies are not available in that category, and coordination is required from the applicable out-of-category coordinator.

(6) The out-of-category licensee must operate by the rules applicable to the category to which the frequency is allocated.

(f) The 896–901/935–940 MHz channels listed as available for eligibles in the Industrial/Land Transportation and Business categories will be available for inter-category sharing to all persons eligible in those categories under the following conditions thirty-six (36) months from the date the first authorization in this spectrum is issued.

(1) The applicant must submit a statement from its own category coordinator that frequencies are not available in that category, and coordination is required from the applicable out-of-category coordinator.

(2) The out-of-category licensee must operate by the rules applicable to the category to which the frequency is allocated.

(g) Applications for Public Safety systems (both trunked and conventional) in the 821–824/866–869 MHz bands will be assigned and protected based on the criteria established in the appropriate regional plan. See § 90.16 and the *Report and Order* in General Docket 87–112.

(h) Channel numbers 401–410, 441–450, 481–490, 521–530, and 561–570 are available on co-primary basis to station in Basic Exchange Telecommunications Radio Service as described in part 22 of the Commission's Rules.

[47 FR 41032, Sept. 16, 1982]

EDITORIAL NOTE: For Federal Register citations affecting § 90.621, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 90.623 Limitations on the number of frequencies assignable for conventional systems.

(a) The maximum number of frequency pairs that may be assigned to a licensee for operation in the conventional mode in a given area is five (5).

(b) Where an applicant proposes to operate a conventional radio system to provide facilities for the use of a single person or entity eligible under subparts B or C of this part, the applicant may be assigned only the number of frequency pairs justified on the basis of the requirement of the proposed single user of the system.

(c) No non-SMR licensee will be authorized an additional frequency pair for a conventional system within 64

kilometers (40 miles) of an existing conventional system, except where:

(1) The additional frequency pair will be used to provide radio facilities to a single entity and the additional frequency pair is justified on the basis of the requirements of the proposed single user; or,

(2) The licensee's existing frequency pair(s) is loaded to prescribed levels.

(d) No licensee will be authorized frequencies for a conventional system if that licensee is operating an unloaded trunked system or has an application pending for a trunked system to serve multiple subscribers within 64 km (40 miles) of the requested conventional system.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 44559, Sept. 29, 1983; 48 FR 51929, Nov. 15, 1983; 58 FR 44963, Aug. 25, 1993; 59 FR 59966, Nov. 21, 1994; 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, §90.623 was amended by revising paragraph (b), effective Oct. 17, 1997.

§90.625 Other criteria to be applied in assigning channels for use in conventional systems of communication.

(a) Where an applicant shows that a channel will be loaded to 70 mobile stations, that channel will be made available to that applicant for its exclusive use in the area in which it proposes to operate. If the showing made justifies the assignment of more than one channel to the applicant, additional frequencies will be authorized.

(b) Where an applicant proposes to furnish service to eligibles under subparts B or C of this part on a commercial basis using a conventional system of communication, the applicant will be considered on the same basis as that of an applicant for private or shared communication facilities.

(c) No person authorized to operate any radio facility under the provisions of this subpart shall have a right to protest proposals on grounds other than violation of or inconsistency with the provisions of this subpart. All grants are made subject to this condition and to the other conditions and standards set out in this subpart.

[47 FR 41032, Sept. 16, 1982, as amended at 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, §90.625 was amended by revising paragraph (b), effective Oct. 17, 1997.

§90.627 Limitation on the number of frequency pairs that may be assignable for trunked systems and on the number of trunked systems.

(a) The maximum number of frequency pairs that may be assigned at any one time for the operation of a trunked radio system is twenty, except as specified in §90.621(a)(1)(iv).

(b) No non-SMR licensee will be authorized an additional trunked system within 64 kilometers (40 miles) of an existing trunked system, except where:

(1) The additional trunked system will be used to provide radio facilities for a single entity, where the additional system is justified on the basis of the requirements of the proposed single user; or,

(2) The licensee's existing trunked system is loaded to at least 70 mobile and control stations per channel.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 44559, Sept. 29, 1983; 48 FR 51929, Nov. 15, 1983; 49 FR 36377, Sept. 17, 1984; 51 FR 37404, Oct. 22, 1986; 53 FR 12157, Apr. 13, 1988; 58 FR 44963, Aug. 25, 1993; 59 FR 59966, Nov. 21, 1994]

§90.629 Extended implementation period.

Applicants requesting frequencies for either trunked or conventional operations may be authorized a period of up to five (5) years for constructing and placing a system in operation in accordance with the following:

(a) The applicant must justify an extended implementation period. The justification must describe the proposed system, state the amount of time necessary to construct and place the system in operation, identify the number of base stations to be constructed and placed in operation during each year of the extended construction period, and show that:

(1) The proposed system will require longer than eight months (if a conventional system) or one year (if a trunked system) to construct and place in operation because of its purpose, size, or complexity; or

(2) The proposed system is to be part of a coordinated or integrated wide-area system which will require more than eight months (if a conventional

system) or one year (if a trunked system) to plan, approve, fund, purchase, construct, and place in operation; or

(3) The applicant is required by law to follow a multi-year cycle for planning, approval, funding, and purchasing the proposed system.

(b) Where an applicant is required by law to follow a multi-year cycle for planning, approval, funding and purchasing a proposed system, the applicant must indicate whether funding approval has been obtained and if not, when such funding approval is expected.

(c) Authorizations under this section are conditioned upon the licensee constructing and placing its system in operation within the authorized implementation period and in accordance with an approved implementation plan of up to five years. Licensees must certify annually that they are in compliance with their yearly station construction commitments, but may request amendment to these commitments at the time they file their annual certification. If the Commission approves the requested amendments to a licensee's implementation commitments, the licensee's extended implementation authority will remain in effect. If, however, the Commission concludes, at this or any other time, that a licensee has failed to meet its commitments, the Commission will terminate authority for the extended implementation period. When the Commission terminates an extended implementation authority, the affected licensee will be given six months from the date of termination to complete system construction. At the end of any licensee's extended implementation period, authorizations for all stations not constructed and placed in operation will be cancelled. Trunked systems granted an extended implementation period must comply with the channel loading requirements of section 90.631(b). Conventional channels not loaded to 70 mobile units may be subject to shared use by the addition of other licensees.

(d) Applicants eligible in the Industrial/Land Transportation Category requesting authorizations under this section may request frequencies in the Business Category only if the application contains a statement that no fre-

quencies in the Industrial/Land Transportation Category are available for assignment in their geographic area.

(e) As of March 18, 1996, Specialized Mobile Radio systems are not eligible for extended implementation periods under this section. Additionally, all 800 MHz SMR licensees that are operating under extended implementation authority as of March 18, 1996 must, by May 16, 1996, demonstrate that continuing to allow them to have an extended period of time to construct their facilities is warranted and furthers the public interest. If a licensee's extended implementation authority showing is approved by the Bureau, such licensee will be afforded an extended implementation of two years or the remainder of its current extended implementation period, whichever is shorter. Upon the termination of this period, the authorizations for those facilities that remain unconstructed will terminate automatically. If a licensee with a current extended implementation period fails to submit the showing mentioned above within the designated timeframe or submits an insufficient or incomplete showing, such licensee will have six months from the last day on which it could timely file such a showing or from the disapproval of its request to construct the remaining facilities covered under its implementation plan to construct any unconstructed facilities for which it is authorized. The authorizations for those facilities remaining unconstructed after this six-month period will terminate automatically.

[58 FR 34379, June 25, 1993, as amended at 61 FR 6157, Feb. 16, 1996]

§90.631 Trunked systems loading, construction and authorization requirements.

(a) Non-SMR trunked systems will be authorized on the basis of a loading criteria of one hundred (100) mobile stations per channel. For purposes of determining compliance with trunked system loading requirements under this subpart, the term "mobile station" includes vehicular and portable mobile units and control stations.

(b) Each applicant for a non-SMR trunked system must certify that a minimum of seventy (70) mobiles for each channel authorized will be placed

into operation within five (5) years of the initial license grant. Except for SMR systems licensed in the 806-821/851-866 MHz band and as indicated in paragraph (i) of this section, if at the end of five (5) years a trunked system is not loaded to the prescribed levels and all channels in the licensee's category are assigned in the system's geographic area, authorizations for trunked channels not loaded to seventy (70) mobile stations cancels automatically at a rate that allows the licensee to retain one channel for every one hundred (100) mobiles loaded, plus one additional channel. If a trunked system has channels from more than one category, Spectrum Block D frequencies in the 800 MHz SMR service (formerly General Category) channels are the first channels considered to cancel automatically. All non-SMR licensees initially authorized before June 1, 1993, that are within their original license term, or SMR licensees that are within the term of a two-year authorization granted in accordance with paragraph (i) of this section, are subject to this condition. A licensee that has authorized channels cancelled due to failure to meet the above loading requirements will not be authorized additional channels to expand that same system for a period of six (6) months from the date of cancellation.

(c) Except for SMR applicants and as provided in paragraph (d) of this section, an applicant seeking to expand a trunked system by requesting additional channels from the Commission, or through intercategory sharing, or through an assignment, must have a loading level of seventy (70) mobiles per channel on the existing system that is the subject of the expansion request.

(d) In rural areas, a licensee of a trunked system may request to increase its system capacity by five more channels than it has constructed without meeting the loading requirements specified in paragraphs (b) and (c) of this section. A rural area is defined for purposes of this section as being beyond a 100-mile radius of the designated centers of the following urbanized areas, as well as those areas that have a waiting list. (Rural areas may be different for 800 and 900 MHz chan-

nels since the Commission maintains separate waiting lists for these frequency bands.) The identified urbanized areas are: New York, NY; Los Angeles, CA; Chicago, IL; Philadelphia, PA; San Francisco, CA; Detroit, MI; Boston, MA; Houston, TX; Washington, DC; Dallas-Fort Worth, TX; Miami, FL; Cleveland, OH; St. Louis, MO; Atlanta, GA; Pittsburgh, PA; Baltimore, MD; Minneapolis-St. Paul, MN; Seattle, WA; San Diego, CA; and Tampa-St. Petersburg, FL. The coordinates for the centers of these areas are those referenced in §90.635, except that the coordinates for Tampa-St. Petersburg are latitude 28°00'00" N, longitude 82°27'00" W. Where waiting lists determine whether an area is rural, the designated centers of those areas will be identified on the actual waiting lists released by the Commission. If a waiting list is later established in a rural area, licensees who have acquired additional channels pursuant to this paragraph will be subject to the automatic cancellation provisions in paragraph (b) of this section at the end of one year from the date the area first appears on a Commission waiting list, or at the end of their license term, whichever is longer.

(e) Except as provided in §90.629, licensees of trunked facilities must complete construction within one year.

(f) If a station is not placed in permanent operation, in accordance with the technical parameters of the station authorization, within one year, except as provided in §90.629, its license cancels automatically and must be returned to the Commission. For purposes of this section, a base station is not considered to be placed in operation unless at least two associated mobile stations, or one control station and one mobile station, are also placed in operation. An SMR licensee with facilities that have discontinued operations for 90 continuous days after the effective date of this rule is presumed to have permanently discontinued operations, unless the licensee notifies the FCC otherwise prior to the end of the 90 day period and provides a date on which operation will resume, which date must not be in excess of 30 additional days.

(g) Wide area systems may be authorized to persons eligible for licensing

under subparts B or C of this part upon an appropriate showing of need. Remote or satellite stations of wide area systems in the Public Safety, Special Emergency, Telephone Maintenance, and Power Radio Services may be authorized on a primary basis if such stations are the first to be authorized in their area of operation on the frequency or group of frequencies. Remote or satellite stations of wide area systems in all other services will be authorized only on a secondary, non-interference basis to cochannel licensees. To determine system loading, the total number of mobile units and control stations operating in the wide-area system shall be counted with respect to the total number of base station frequencies assigned to the system.

(h) Regional, statewide, or ribbon configuration systems may be authorized to persons eligible for licensing under subparts B or C of this part upon an appropriate showing of need. In a ribbon, regional or statewide system, a mobile station will be counted for channel loading purposes only for the base station facility in the geographic area in which it primarily operates. If this cannot be determined, it will be counted fractionally over the number of base station facilities with which it communicates regularly.

(i) For SMRS category trunked systems licensed in the 896–901/935–940 MHz band (other than MTA-licensed systems), if at the end of the initial five-year license term the licensee of such a trunked system has not satisfied the loading requirements of paragraph (b) of this section, the licensee requesting renewal of its license will be granted a renewal for only a two-year period. Regardless of the date of grant of the two-year renewal, the licensee will be required to comply fully with the minimum requirements set forth in paragraph (b) of this section at the end of the two-year renewal term. As an exception to this requirement, if the licensee obtains the MTA license covering its assigned spectrum in accordance with §§90.661 through 90.671, these loading requirements will no longer be

applicable and the coverage requirements of §90.665 will govern.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 51929, Nov. 15, 1983; 49 FR 36377, Sept. 17, 1984; 53 FR 12157, Apr. 13, 1988; 57 FR 37731, Aug. 20, 1992; 58 FR 12177, Mar. 3, 1993; 59 FR 59966, Nov. 21, 1994; 60 FR 21991, May 4, 1995; 60 FR 48918, Sept. 21, 1995; 61 FR 6157, Feb. 16, 1996; 61 FR 6577, Feb. 21, 1996; 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, §90.631 was amended by revising the first sentences of paragraphs (g) and (h), effective Oct. 17, 1997.

§90.633 Conventional systems loading requirements.

(a) Non-SMR conventional systems of communication will be authorized on the basis of a minimum loading criteria of seventy (70) mobile stations for each channel authorized.

(b) A channel will not be assigned to additional licensees when it is loaded to 70 mobile stations. Where a licensee does not load a channel to 70 mobiles the channel will be available for assignment to other licensees. All authorizations for conventional systems are issued subject to this potential channel sharing condition.

(c) Except as provided in §90.629 licensees of conventional systems must place their authorized facilities in operation not later than eight months after the date of grant of the license for the system.

(d) If a station is not placed in operation in eight months, except as provided in §90.629, its license cancels automatically and must be returned to the Commission. For purposes of this section, a base station is not considered to be placed in operation unless at least one associated mobile station is also placed in operation.

(e) A non-SMR licensee may apply for additional frequency pairs if its authorized conventional channel(s) is loaded to seventy (70) mobiles. Applications may be considered for additional channels in areas where spectrum is still available and not applied for, even if the already authorized channel(s) is not loaded to 70 mobile units, upon an appropriate demonstration of need.

(f) Wide area systems may be authorized to persons eligible for licensing

under subparts B or C of this part upon an appropriate showing of need. For loading purposes, if the total number of mobile stations justifies the total number of authorized based frequencies in a given area, the system will be construed to be loaded.

(g) Regional, statewide, or ribbon configuration systems may be authorized to persons eligible for licensing under subparts B or C of this part upon an appropriate showing of need. In a ribbon, regional or statewide system, a mobile station will be counted for channel loading purposes only for the base station facility in the geographic area in which it primarily operates. If this cannot be determined, it will be counted fractionally over the number of base station facilities with which it communicates regularly.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 51929, Nov. 15, 1983; 56 FR 65860, Dec. 19, 1991; 59 FR 59966, Nov. 21, 1994; 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, § 90.633 was amended by revising the first sentences of paragraphs (f) and (g), effective Oct. 17, 1997.

TECHNICAL REGULATIONS REGARDING THE USE OF FREQUENCIES IN THE 806-824 MHz, 851-869 MHz, 896-901 MHz, AND 935-940 MHz BANDS

§ 90.635 Limitations on power and antenna height.

(a) Systems to be located within 24 km. (15 mi.) of the geographic center of the 50 urbanized areas detailed in table 1 will be considered "urban" systems. All others will be considered "suburban" systems.

(b) The effective radiated power and antenna height, for base stations used in suburban-conventional systems of communications, shall be no greater than 500 watts (27 dBw) and 152 m. (500 ft.) above average terrain (AAT), respectively, or the equivalent as determined from table 2. These are maximum values, and applicants are required to justify power levels and antenna heights requested. For service area requirements less than 32 km. (20 mi.) in radius, see table 3.

(c) The effective radiated power and antenna height for base stations used in trunked and urban-conventional systems

may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from table 2. These are maximum values, and applicants will be required to justify power levels and antenna heights requested. For service area requirements less than 32 km (20 mi.) in radius, see table 4.

(d) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

TABLE 1—URBANIZED AREAS

Urbanized area	Geographic center	
	North latitude	West longitude
Akron, OH	41°05'00"	81°30'44"
Albany-Schenectady-Troy, NY ..	42°39'01"	73°45'01"
Atlanta, GA	33°45'10"	84°23'37"
Baltimore, MD	39°17'26"	76°36'45"
Birmingham, AL	33°31'01"	86°48'36"
Boston, MA	42°21'24"	71°03'24"
Buffalo, NY	42°53'12"	78°52'30"
Chicago, IL	41°52'28"	87°38'22"
Cincinnati, OH	39°06'07"	84°30'35"
Cleveland, OH	41°29'51"	81°41'50"
Columbus, OH	39°57'47"	83°00'17"
Dallas, TX	32°47'09"	96°47'37"
Dayton, OH	39°45'32"	84°11'43"
Denver, CO	39°44'58"	104°59'22"
Detroit, MI	42°19'48"	83°02'57"
Fort Lauderdale-Hollywood, FL ..	26°07'30"	80°09'00"
Fort Worth, TX	32°44'55"	97°19'44"
Houston, TX	29°45'26"	95°21'37"
Indianapolis, IN	39°46'07"	86°09'46"
Jacksonville, FL	30°19'44"	81°39'42"
Kansas City, MO-KS	39°04'56"	94°35'20"
Los Angeles, CA	34°03'15"	118°14'28"
Louisville, KY-IN	38°14'47"	85°45'49"
Miami, FL	25°46'37"	80°11'32"
Memphis, TN-MS	35°08'46"	90°03'13"
Milwaukee, WI	43°02'19"	87°54'15"
Minneapolis-St. Paul, MN	44°58'57"	93°15'43"
New Orleans, LA	29°56'53"	90°04'10"
New York-northeastern New Jersey	40°45'06"	73°59'39"
Norfolk-Portsmouth, VA	36°51'10"	76°17'21"
Oklahoma City, OK	35°28'26"	97°31'04"
Omaha, NE-IO	41°15'42"	95°56'14"
Philadelphia, PA-NJ	39°56'58"	75°09'21"
Phoenix, AZ	33°27'12"	112°04'28"
Pittsburgh, PA	40°26'19"	80°00'00"
Portland, OR-WA	45°31'06"	122°40'35"
Providence-Pawtucket-Warwick, RI-MA	41°49'32"	71°24'41"
Rochester, NY	43°09'41"	77°36'21"
Sacramento, CA	38°34'57"	121°29'41"
St. Louis, MO-IL	38°37'45"	90°12'22"
St. Petersburg, FL	27°46'18"	82°38'19"
San Antonio, TX	29°25'37"	98°29'06"
San Bernardino-Riverside, CA ..	34°06'30"	117°17'28"
San Diego, CA	32°42'53"	117°09'21"
San Francisco-Oakland, CA	37°46'39"	122°24'40"
San Jose, CA	37°20'16"	121°53'24"
Seattle, WA	47°36'32"	122°20'12"
Springfield-Chicopee-Holyoke, MA-CT	42°06'21"	72°35'32"
Toledo, OH-MI	41°39'14"	83°32'39"

TABLE 1—URBANIZED AREAS—Continued

Urbanized area	Geographic center	
	North latitude	West longitude
Washington, DC-MD-VA	38°53'51"	77°00'33"

TABLE 2—EQUIVALENT POWER AND ANTENNA HEIGHTS FOR BASE STATIONS IN THE 851–869 MHz AND 935–940 MHz BANDS WHICH HAVE A REQUIREMENT FOR A 32 KM (20 MI) SERVICE AREA RADIUS

Antenna height (ATT) meters (feet)	Effective radiated power (watts) ^{1,2,5}	
	Urban/ trunked	Suburban
Above 1,372 (4,500)	65	15
Above 1,220 (4,000) to 1,372 (4,500)	70	20
Above 1,067 (3,500) to 1,220 (4,000)	75	25
Above 915 (3,000) to 1,067 (3,500)	100	30
Above 763 (2,500) to 915 (3,000)	140	35

TABLE 2—EQUIVALENT POWER AND ANTENNA HEIGHTS FOR BASE STATIONS IN THE 851–869 MHz AND 935–940 MHz BANDS WHICH HAVE A REQUIREMENT FOR A 32 KM (20 MI) SERVICE AREA RADIUS—Continued

Antenna height (ATT) meters (feet)	Effective radiated power (watts) ^{1,2,5}	
	Urban/ trunked	Suburban
Above 610 (2,000) to 763 (2,500)	200	50
Above 458 (1,500) to 610 (2,000)	350	80
Above 305 (1,000) to 458 (1,500)	600	160
Above 152.5 (500) to 305 (1,000)	³ 1,000	220
Up to 152.5 (500)	1,000	⁴ 500

¹ Power is given in terms of effective radiated power (ERP).² Applicants in the Los Angeles, CA, area who demonstrate a need to serve both the downtown and fringe areas will be permitted to utilize an ERP of 1 kw at the following mountaintop sites: Santiago Park, Sierra Peak, Mount Lukens, and Mount Wilson.³ Stations with antennas below 305 m (1,000 ft) (AAT) will be restricted to a maximum power of 1 kw (ERP).⁴ Stations with antennas below 152.5 m (500 ft) (AAT) will be restricted to a maximum power of 500 W (ERP).⁵ Licensees in San Diego, CA, will be permitted to utilize an ERP of 500 watts at the following mountaintop sites: Palomar, Otay, Woodson and Miguel.

TABLE 3—EQUIVALENT POWERS AND ANTENNA HEIGHTS FOR SUBURBAN-CONVENTIONAL BASE STATIONS IN THE 851–869 MHz AND 935–940 MHz Bands Which Have a Requirement for Less Than 32.2 km (20 mi) SERVICE AREA RADIUS—MAXIMUM EFFECTIVE RADIATED POWER (WATTS)

[Base station antenna height (AAT) in meters (feet)]

	Above /to					
	122 (400) to 152.5 (500)	91.5 (300) to 122 (400)	61 (200) to 91.5 (300)	30.5 (100) to 61 (200)	15 (50) to 30.5 (100)	0 (0) to 15 (50)
Service area radius km (mi):						
32 (20)	500	500	500	500	500	500
30 (19)	400	500	500	500	500	500
29 (18)	310	385	500	500	500	500
27 (17)	235	300	385	500	500	500
26 (16)	175	220	285	440	500	500
24 (15)	130	160	215	330	500	500
22 (14)	95	120	155	240	480	500
21 (13)	70	85	115	175	350	500
19 (12)	50	60	80	125	250	500
18 (11)	35	45	60	90	180	360
16 (10)	25	30	40	60	120	240
14 (9)	15	20	25	40	80	160
13 (8)	10	12	15	25	50	100
11 (7)	6	7	10	15	30	60
10 (6)	3	4	5	7	15	30
8 (5) or less	1	2	3	4	8	16

TABLE 4—EQUIVALENT POWERS AND ANTENNA HEIGHTS FOR URBAN-CONVENTIONAL AND TRUNKED SYSTEM BASE STATIONS IN THE 851–869 MHz AND 935–940 MHz BANDS WHICH HAVE A REQUIREMENT FOR LESS THAN 32.2 km (20 mi) SERVICE AREA RADIUS—MAXIMUM EFFECTIVE RADIATED POWER (WATTS)

Base station antenna height (AAT) meters (feet)								
Above	228 (750)	152.5 (500)	122 (400)	91.5 (300)	61 (200)	30.5 (100)	15 (50)	0 (0)
	305 (1,000)	228 (750)	152.5 (500)	122 (400)	91.5 (300)	61 (200)	30.5 (100)	15 (50)
Service area radius: km (mi):								
32 (20)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
30 (19)	800	1,000	1,000	1,000	1,000	1,000	1,000	1,002

TABLE 4—EQUIVALENT POWERS AND ANTENNA HEIGHTS FOR URBAN-CONVENTIONAL AND TRUNKED SYSTEM BASE STATIONS IN THE 851–869 MHz AND 935–940 MHz BANDS WHICH HAVE A REQUIREMENT FOR LESS THAN 32.2 km (20 mi) SERVICE AREA RADIUS—MAXIMUM EFFECTIVE RADIATED POWER (WATTS)—Continued

Base station antenna height (AAT) meters (feet)								
Above	228 (750)	152.5 (500)	122 (400)	91.5 (300)	61 (200)	30.5 (100)	15 (50)	0 (0)
to	305 (1,000)	228 (750)	152.5 (500)	122 (400)	91.5 (300)	61 (200)	30.5 (100)	15 (50)
29 (18)	640	830	1,000	1,000	1,000	1,000	1,000	1,000
27 (17)	480	625	960	1,000	1,000	1,000	1,000	1,000
26 (16)	360	470	720	900	1,000	1,000	1,000	1,000
24 (15)	270	350	540	675	875	1,000	1,000	1,000
22 (14)	200	260	400	500	650	1,000	1,000	1,000
21 (13)	140	180	280	350	450	700	1,000	1,000
19 (12)	100	130	200	250	325	500	1,000	1,006
18 (11)	70	90	140	175	230	350	700	1,000
16 (10)	45	60	90	110	145	220	440	1,000
14 (9)	30	40	60	75	100	150	300	600
13 (8)	20	25	40	50	65	100	200	400
11 (7)	15	20	30	40	50	80	160	300
10 (6)	8	10	16	20	25	40	80	100
8 (5) or less	5	6	9	12	15	25	50	100

[47 FR 41032, Sept. 16, 1982; 47 FR 41045, Sept. 16, 1982, as amended at 50 FR 784, Jan. 7, 1985; 51 FR 37404, Oct. 22, 1986; 52 FR 29857, Aug. 12, 1987; 53 FR 1027, Jan. 15, 1988; 58 FR 44963, Aug. 25, 1993; 60 FR 50123, Sept. 28, 1995]

§ 90.637 Restrictions on operational fixed stations.

(a) Except for control stations, operational fixed operations will not be authorized in the 806–824 MHz, 851–869 MHz, 896–901 MHz, or 935–940 MHz bands. This does not preclude secondary fixed tone signaling and alarm operations authorized in § 90.235 or in paragraph (c) of this section.

(b) Control stations associated with one or more mobile relay stations will be authorized only on the assigned frequency of the associated mobile station. Use of a mobile service frequency by a control station of a mobile relay system is subject to the condition that harmful interference shall not be caused to stations of licensees authorized to use the frequency for mobile service communications.

(c) Trunked and conventional systems that have exclusive-use status in their respective geographic areas may conduct fixed ancillary signaling and data transmissions subject to the following requirements:

(1) All operations must be on a secondary, non-interference basis to the primary mobile operation of any other licensee.

(2) The output power at the remote site must not exceed 30 watts.

(3) Any fixed transmitters will not count toward meeting the mobile loading requirements nor be considered in whole or in part as a justification for authorizing additional frequencies in the licensee's mobile system.

(4) Automatic means must be provided to deactivate the remote transmitter in the event the carrier remains on for a period in excess of three minutes.

(5) Operational fixed stations authorized pursuant to the provisions of paragraphs (c) and (d) of this section are exempt from the requirements of §§ 90.425 and 90.429.

(d) Conventional systems that do not have exclusive-use status in their respective geographic areas may conduct fixed ancillary signaling and data transmissions only in accordance with all the provisions of § 90.235.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 51929, Nov. 15, 1983; 49 FR 36377, Sept. 17, 1984; 51 FR 37405, Oct. 22, 1986; 52 FR 1332, Jan. 13, 1987; 53 FR 12157, Apr. 13, 1988; 57 FR 34693, Aug. 6, 1992]

§ 90.645 Permissible operations.

Conventional and trunked radio systems may be used:

(a) Only for purposes expressly allowed under this part.

(b) Only persons who are eligible for facilities, either under this subpart or in the radio service included under subparts B or C of this part.

(c) Except for licensees classified as CMRS providers under part 20 of this chapter, only for the transmission of messages or signals permitted in the services in which the participants are eligible.

(d) For digital or analog transmissions.

(e) An SMRS licensee or a licensee who has been authorized a channel(s) on an exclusive basis, may use the system for the transmission of any base/mobile message, page or signal permitted in the service in which the participants are eligible.

(f) Where the channel(s) is assigned to an SMRS licensee or exclusively to a single licensee, or where all users of a system agree, more than a single emission may be utilized within the authorized bandwidth. In such cases, the frequency stability requirements of § 90.213 shall not apply, but out-of-band emission limits of § 90.209 shall be met.

(g) Up to five (5) contiguous 806–821/851–866 band channels as listed in §§ 90.615, 90.617, and 90.619 may be authorized after justification for systems requiring more than the normal single channel bandwidth. If necessary, licensees may trade channels amongst themselves in order to obtain contiguous frequencies. Notification of such proposed exchanges shall be made to the appropriate frequency coordinator(s) and to the Commission for approval.

(h) Up to 10 contiguous 896–901/935–940 MHz band channels as listed in § 90.617 may be combined for systems requiring more than the normal single channel bandwidth. If necessary, licensees may trade channels amongst themselves in order to obtain contiguous frequencies. Notification of such proposed exchanges shall be made to the appropriate frequency coordinator(s) and to the Commission for approval.

(i) Paging operations may be utilized on multiple licensed facilities (commu-

nity repeaters) only when all licensees of the facility agree to such use.

[47 FR 41032, Sept. 16, 1982, as amended at 48 FR 51929, Nov. 15, 1983; 51 FR 37405, Oct. 22, 1986; 59 FR 59966, Nov. 21, 1994; 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, § 90.645 was amended by revising paragraph (b), effective Oct. 17, 1997.

§ 90.647 Station identification.

(a) Conventional systems of communication shall be identified in accordance with existing regulations governing such matters.

(b) Trunked systems of communication, except as noted in paragraph (c) of this section, shall be identified through the use of an automatic device which transmits the call sign of the base station facility at 30 minute intervals. Such station identification shall be made on the lowest frequency in the base station trunk group assigned the licensee. Should this frequency be in use at the time station identification is required, such identification may be made at the termination of the communication in progress on this frequency. Identification may be made by voice or International Morse Code. When the call sign is transmitted in International Morse Code, it must be at a rate of between 15 to 20 words per minute and by means of tone modulation of the transmitter, the tone frequency being between 800 and 1000 hertz.

(c) Stations operating in either the 806–824/851–869 MHz or 896–901/935–940 MHz bands that are licensed on an exclusive basis, and normally employ digital signals for the transmission of data, text, control codes, or digitized voice may also be identified by digital transmission of the call sign. A licensee that identifies its station in this manner must provide the Commission, upon its request, information sufficient to decode the digital transmission and ascertain the call sign transmitted.

[47 FR 41032, Sept. 16, 1982, as amended at 58 FR 12177, Mar. 3, 1993]

§ 90.651 Supplemental reports required of licensees authorized under this subpart.

(a) [Reserved]

(b) Other trunked system licensees must report the number of mobile units being served annually, and at the time of filing applications for renewal of licenses. These reports should be filed with the Commission's Private Radio Bureau, Licensing Division, Land Mobile Branch in Gettysburg, PA 17326.

(c) Licensees of conventional systems must report the number of mobile units placed in operation within 8 months of the date of the grant of their license. Such reports shall be filed within 30 days from that date.

(d) Licensees of trunked systems must report, to the Commission's Private Radio Bureau, Licensing Division, Land Mobile Branch in Gettysburg, PA 17326, within thirteen months of the date of the grant, whether or not construction of the facility has been completed.

[47 FR 41032, Sept. 16, 1982, as amended at 47 FR 51883, Nov. 18, 1982; 54 FR 38682, Sept. 20, 1989; 57 FR 40850, Sept. 8, 1992]

§ 90.653 Number of systems authorized in a geographical area.

There shall be no limit on the number of systems authorized to operate in any one given area except that imposed by allocation limitations and no person shall have a right to protest any other proposal on grounds other than violation of any inconsistency with the provisions of this subpart.

[47 FR 41032, Sept. 16, 1982]

§ 90.655 Special licensing requirements for Specialized Mobile Radio systems.

End users of conventional or trunked Specialized Mobile Radio systems that have control stations that require FAA clearance, as specified in subpart B of part 17 of Title 47 of the Code of Federal Regulations, 47 CFR 17.7-17.17, or that may have a significant environmental effect, as defined by § 1.1307, or that are located in a "quiet zone", as defined by 47 CFR 90.177 must be individually licensed for such control stations prior to construction or oper-

ation. All other end users' operations will be within the scope of the base station licensee. All end users, however, continue to be responsible to comply with 47 CFR part 90 and other federal laws.

[57 FR 40850, Sept. 8, 1992]

§ 90.656 Responsibilities of base station licensees of Specialized Mobile Radio systems.

(a) The licensees of base stations that provide Specialized Mobile Radio service on a commercial basis of the use of individuals, Federal government agencies, or persons eligible for licensing under either subparts B or C of this part will be responsible for exercising effective operational control over all mobile and control stations that communicate with the base station. The base station licensee will be responsible for assuring that its system is operated in compliance with all applicable rules and regulations.

(b) Customers that operate mobile units on a particular Specialized Mobile Radio system will be licensed to that system. A customer that operates temporarily on more than one system will be deemed, when communicating with the other system, to be temporarily licensed to the other system and for that temporary period, the licensee of the other system will assume the same licensee responsibility for the customer's mobile station(s) as if the customer's stations were licensed to that other system.

[57 FR 40851, Sept. 8, 1992, as amended at 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, § 90.656 was amended by revising the first sentence of paragraph (a), effective Oct. 17, 1997.

§ 90.657 Temporary permit.

An applicant for a subpart S radio station license utilizing an already authorized facility may operate the radio station(s) for a period of up to 180 days under a temporary permit evidenced by a properly executed certification of FCC Form 572 after filing a formal application for station license, together with evidence of frequency coordination (when required), provided that the antenna(s) employed by the control

station(s) is (are) 6.1 m (20 ft) or less above ground or 6.1 m (20 ft) or less above a man-made structure other than an antenna tower to which it is affixed.

[58 FR 44964, Aug. 25, 1993]

§ 90.658 Loading data required for base station licensees of trunked Specialized Mobile Radio systems to acquire additional channels or to renew trunked systems licensed before June 1, 1993.

(a) A base station licensee of a trunked Specialized Mobile Radio system that applies for additional channels to expand an existing system or to construct a new system within 40 miles of its existing system, or a base station licensee of a trunked system applying for its first renewal in a waiting list area for a system licensed before June 1, 1993 must identify on the appropriate application form the number of mobiles and control stations loaded on its system as calculated in paragraph (b) of this section.

(b) The number described in paragraph (a) of this section must be calculated by averaging the number of mobiles and control stations operating on a licensee's system on the first business day of each of the six months immediately preceding the filing of an application and must be based on the licensee's business records for that period. Alternative calculations will be permitted upon good cause showings of special circumstances.

(c) Business records may constitute invoices, customer service agreements, customer lists or any other type of record kept in the ordinary course of business.

(d) The FCC will use the loading data required by this section to determine whether the licensee's existing system has a sufficient number of mobiles as required by 47 CFR chapter I to qualify for additional channels or for the first renewal of trunked systems licensed before June 1, 1993.

[57 FR 40851, Sept. 8, 1992]

§ 90.659 Change in number or location of base stations or transmitters.

(a) Licensees of trunked Specialized Mobile Radio systems are exempt from the requirement under § 90.135(a)(5) to

file an application for modification of license when there is a change in the location or number of fixed, control, or mobile transmitters from that authorized, including area of mobile operations.

(b) Licensees of conventional Specialized Mobile Radio channels are not exempt from the requirement under § 90.135(a)(5) to file an application for modification of license when there is a change in the location or number of fixed, control, or mobile transmitters from that authorized, including area of mobile operations.

(c) Licensees of trunked and conventional Specialized Mobile Radio systems are not exempt from the requirement under § 90.135(a)(5) to file an application for modification of license when there is a change in the location or number of base stations.

[57 FR 40851, Sept. 8, 1992]

POLICIES GOVERNING THE LICENSING AND USE OF MTA-BASED SMR SYSTEMS IN THE 896–901/935–940 MHz BAND

§ 90.661 MTA-based SMR service areas.

MTA licenses for SMR spectrum blocks in the 896–901/935–940 MHz band listed in table 4B of § 90.617(d) are available in 51 Major Trading Areas (MTAs) as defined in § 90.7. Within these MTAs, licenses will be authorized in ten channel blocks as specified in table 4B of § 90.617(d) through the competitive bidding procedures described in subpart U of this part.

[60 FR 21991, May 4, 1995]

§ 90.663 MTA-based SMR system operations.

(a) MTA-based licensees authorized in the 896–901/935–940 MHz band pursuant to § 90.661 may construct and operate base stations using any frequency identified in their spectrum block anywhere within their authorized MTA, provided that:

(1) The MTA licensee affords protection, in accordance with § 90.621(b), to all sites for which applications were filed on or prior to August 9, 1994.

(2) The MTA licensee complies with any rules and international agreements that restrict use of frequencies identified in their spectrum block, including

the provisions of § 90.619 relating to U.S./Canadian and U.S./Mexican border areas.

(3) The MTA licensee limits its field strength at any location on the border of the MTA service area in accordance with § 90.671 and masks its emissions in accordance with § 90.669.

(b) In the event that the authorization for a previously authorized co-channel station within the MTA licensee's authorized spectrum block is terminated or revoked, the MTA licensee's co-channel obligations to such station will cease upon deletion of the facility from the Commission's licensing record. The MTA licensee then will be able to construct and operate base stations using such frequency.

[60 FR 21991, May 4, 1995]

§ 90.665 Authorization, construction and implementation of MTA licenses.

(a) MTA licenses in the 896-901/935-940 MHz band will be issued for a term not to exceed ten years.

(b) MTA licensees in the 896-901/935-940 MHz band will be permitted five years to construct their stations. This five-year period will commence with the issuance of the MTA-wide authorization and will apply to all of the licensee's stations within the MTA spectrum block, including any stations that may have been subject to an earlier construction deadline arising from a pre-existing authorization.

(c) Each MTA licensee in the 896-901/935-940 MHz band must, three years from the date of license grant, construct and place into operation a sufficient number of base stations to provide coverage to at least one-third of the population of the MTA. Further, each MTA licensee must provide coverage to at least two-thirds of the population of the MTA five years from the date of license grant; or alternatively, demonstrate through a showing to the Commission that it is providing substantial service. The MTA licensee must meet the population coverage benchmarks regardless of the extent to which incumbent licensees are present within the MTA block.

(d) MTA licensees who fail to meet the coverage requirements imposed at either the third or fifth years of their

license term, or to make a convincing showing of substantial service, will forfeit the portion of the MTA license that exceeds licensed facilities constructed and operating on the date of the MTA license grant.

[60 FR 21991, May 4, 1995, as amended at 60 FR 48918, Sept. 21, 1995; 60 FR 61487, Nov. 30, 1995]

§ 90.667 Grandfathering provisions for incumbent licensees.

(a) These provisions apply to all 900 MHz SMR licensees who obtained licenses or filed applications for secondary sites on or before August 9, 1994 ("incumbent licensees"), as well as to all 900 MHz SMR licensees who obtained authorizations pursuant to § 90.173(k). An incumbent licensee's service area shall be defined by its originally-licensed 40 dBu field strength contour. Incumbent licensees are permitted to add new or modify transmit sites in this existing service area without prior notification to the Commission so long as their original 40 dBu field strength contour is not expanded.

(b) Incumbent licensees operating at multiple sites may, after grant of MTA licenses has been completed, exchange multiple site licenses for a single license, authorizing operations throughout the contiguous and overlapping 40 dBu field strength contours of the multiple sites. Incumbents exercising this license exchange option must submit specific information for each of their external base sites after the close of the 900 MHz SMR auction.

(c) Applications in the 900 MHz SMR service for secondary sites filed after August 9, 1994 shall be authorized on a secondary, non-interference basis to MTA licensee operations. No secondary sites shall be granted on this basis in an MTA once the MTA licensee has been selected.

[60 FR 48918, Sept. 21, 1995]

§ 90.669 Emission limits.

(a) On any frequency in an MTA licensee's spectrum block that is adjacent to a non-MTA frequency, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 plus $10 \log_{10}(P)$ decibels

or 80 decibels, whichever is the lesser attenuation.

NOTE: The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

[60 FR 21992, May 4, 1995]

§90.671 Field strength limits.

The predicted or measured field strength at any location on the border of the MTA service area for MTA licensees shall not exceed 40 dBuV/m unless all bordering MTA licensees agree to a higher field strength. MTA licensees are also required to coordinate their frequency usage with so-channel adjacent MTA licensees and all other affected parties. To the extent that a single entity obtains licenses for adjacent MTAs on the same channel block, it will not be required to coordinate its operations in this manner. In the event that this standard conflicts with the MTA licensee's obligation to provide co-channel protection to incumbent licensees under §90.621(b), the requirements of §90.621(b) shall prevail.

[60 FR 21992, May 4, 1995]

POLICIES GOVERNING THE LICENSING AND USE OF EA-BASED SMR SYSTEMS IN THE 806–821/851–866 BAND

SOURCE: 61 FR 6158, 6159, Feb. 16, 1996, unless otherwise noted.

§90.681 EA-based SMR service areas.

EA licenses in Spectrum Blocks A through V band listed in Table 4A of §90.617(d) are available in 175 Economic Areas (EAs) as defined in §90.7.

[62 FR 41216, July 31, 1997]

§90.683 EA-based SMR system operations.

(a) EA-based licensees authorized in the 806–821/851–866 MHz band pursuant to §90.681 may construct and operate base stations using any of the base station frequencies identified in their spectrum block anywhere within their authorized EA, provided that:

(1) The EA licensee affords protection, in accordance with §90.621(b), to all previously authorized co-channel stations that are not associated with another EA license;

(2) The EA licensee complies with any rules and international agreements that restrict use of frequencies identified in their spectrum block, including the provisions of §90.619 relating to U.S./Canadian and U.S./Mexican border areas;

(3) The EA licensee limits the field strength of its base stations at any location on the border of the EA service area in accordance with §90.689;

(4) The EA licensee notifies the Commission within 30 days of the completion of the addition, removal, relocation or modification of any of its facilities within the EA. Such notification must be made by submitting an FCC Form 600 and must include the appropriate filing fee, if any; and

(5) For any construction or alteration that would exceed the requirements of §17.7 of this chapter, licensees must notify the appropriate Regional Office of the Federal Aviation Administration (FAA Form 7460–1) and file a request for antenna height clearance and obstruction marking and lighting specifications (FCC Form 854) with the FCC, WTB, Support Services Branch, Gettysburg, PA 17325.

(6) Any additional transmitters placed in operation must not have a significant environmental effect as defined by §§1.1301 through 1.1319 of this chapter.

(b) In the event that the authorization for a previously authorized co-channel station within the EA licensee's spectrum block is terminated or revoked, the EA licensee's co-channel obligations to such station will cease upon deletion of the facility from the Commission's official licensing records, and the EA licensee then will be able to construct and operate without regard to that previous authorization.

[61 FR 6158, 6159, Feb. 16, 1996, as amended at 62 FR 41216, July 31, 1997]

§90.685 Authorization, construction and implementation of EA licenses.

(a) EA licenses in the 806–821/851–866 MHz band will be issued for a term not to exceed ten years. Additionally, EA

licensees generally will be afforded a renewal expectancy only for those stations put into service after August 10, 1996.

(b) EA licensees in the 806–821/851–866 MHz band must, within three years of the grant of their initial license, construct and place into operation a sufficient number of base stations to provide coverage to at least one-third of the population of its EA-based service area. Further, each EA licensee must provide coverage to at least two-thirds of the population of the EA-based service area within five years of the grant of their initial license. Alternatively, EA licensees in Channel blocks D through V in the 806–821/851–866 MHz band must provide substantial service to their markets within five years of the grant of their initial license. Substantial service shall be defined as: “Service which is sound, favorable, and substantially above a level of mediocre service.”

(c) *Channel use requirement.* In addition to the population coverage requirements described in this section, we will require EA licensees in Channel blocks A, B and C in the 816–821/861–866 MHz band to construct 50 percent of the total channels included in their spectrum block in at least one location in their respective EA-based service area within three years of initial license grant and to retain such channel usage for the remainder of the construction period.

(d) An EA licensee’s failure to meet the population coverage requirements of paragraphs (b) and (c) of this section, will result in forfeiture of the entire EA license. Forfeiture of the EA license, however, would not result in the loss of any constructed facilities authorized to the licensee prior to the date of the commencement of the auction for the EA licenses.

[62 FR 41216, July 31, 1997]

§ 90.687 Special provisions regarding assignments and transfers of authorizations for incumbent SMR licensees in the 806–821/851–866 MHz band.

An SMR licensee initially authorized on any of the channels listed in Table 4A of § 90.617 may transfer or assign its channel(s) to another entity subject to

the provisions of §§ 90.153 and 90.609(b). If the proposed transferee or assignee is the EA licensee for the spectrum block to which the channel is allocated, such transfer or assignment presumptively will be deemed to be in the public interest. However, such presumption will be rebuttable.

[62 FR 41216, July 31, 1997]

§ 90.689 Field strength limits.

(a) For purposes of implementing §§ 90.689 through 90.699, predicted 36 and 40 dB μ V/m contours shall be calculated using Figure 10 of § 73.699 of this chapter with a correction factor of –9 dB, and predicted 18 and 22 dB μ V/m contours shall be calculated using Figure 10a of § 73.699 of this chapter with a correction factor of –9 dB.

(b) The predicted or measured field strength at any location on the border of the EA-based service area for EA licensees must not exceed 40 dB μ V/m unless all bordering EA licensees agree to a higher field strength. In the event that this standard conflicts with the EA licensee’s obligation to provide co-channel protection to incumbent licensees pursuant to § 90.621(b), the requirements of § 90.621(b) shall prevail.

[61 FR 6158, 6159, Feb. 16, 1996, as amended at 62 FR 41216, July 31, 1997]

§ 90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee’s frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee’s frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the

transmitter power (P) in watts by at least $43 + 10\log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

§ 90.693 Grandfathering provisions for incumbent licensees.

(a) *General provisions.* These provisions apply to “incumbent licensees”, all 800 MHz SMR licensees who obtained licenses or filed applications on or before December 15, 1995.

(b) *Spectrum blocks A through V.* An incumbent licensee’s service area shall be defined by its originally-licensed 40 dBμV/m field strength contour and its interference contour shall be defined as its originally-licensed 22 dBμV/m field strength contour. Incumbent licensees are permitted to add, remove or modify transmitter sites within their original 22 dBμV/m field strength contour without prior notification to the Commission so long as their original 22 dBμV/m field strength contour is not expanded and the station complies with the Commission’s short-spacing criteria in §§ 90.621(b)(4) through 90.621(b)(6). The incumbent licensee must, however, notify the Commission within 30 days of the completion of any changes in technical parameters or additional stations constructed through a minor modification of their license. Such notification must be made by submitting an FCC Form 600 and must include the appropriate filing fee, if any. These minor modification applications are not subject to public notice and petition to deny requirements or mutually exclusive applications.

(c) *Special provisions for spectrum blocks D through V.* Incumbent licensees that have received the consent of all affected parties to utilize an 18 dBμV/m signal strength interference contour shall have their service area defined by their originally-licensed 36 dBμV/m field strength contour and its interference contour shall be defined as their originally-licensed 18 dBμV/m

field strength contour. Incumbent licensees are permitted to add, remove or modify transmitter sites within their original 18 dBμV/m field strength contour without prior notification to the Commission so long as their original 18 dBμV/m field strength contour is not expanded and the station complies with the Commission’s short-spacing criteria in §§ 90.621(b)(4) through 90.621(b)(6). The incumbent licensee must, however, notify the Commission within 30 days of the completion of any changes in technical parameters or additional stations constructed through a minor modification of their license. Such notification must be made by submitting an FCC Form 600 and must include the appropriate filing fee, if any. These minor modification applications are not subject to public notice and petition to deny requirements or mutually exclusive applications.

(d) *Consolidated license—(1) Spectrum blocks A through V.* Incumbent licensees operating at multiple sites may, after grant of EA licenses has been completed, exchange multiple site licenses for a single license, authorizing operations throughout the contiguous and overlapping 40 dBμV/m field strength contours of the multiple sites. Incumbents exercising this license exchange option must submit specific information for each of their external base sites after the close of the 800 MHz SMR auction.

(2) *Special provisions for spectrum blocks D through V.* Incumbent licensees that have received the consent of all affected parties to utilize an 18 dBμV/m signal strength interference contour operating at multiple sites may, after grant of EA licenses has been completed, exchange multiple site licenses for a single license. This single site license will authorize operations throughout the contiguous and overlapping 36 dBμV/m field strength contours of the multiple sites. Incumbents exercising this license exchange option must submit specific information for each of their external base sites after the close of the 800 MHz SMR auction.

[62 FR 41216, July 31, 1997]

§ 90.699 Transition of the upper 200 channels in the 800 MHz band to EA licensing.

In order to facilitate provision of service throughout an EA, an EA licensee may relocate incumbent licensees in its EA by providing "comparable facilities" on other frequencies in the 800 MHz band. Such relocation is subject to the following provisions:

(a) EA licensees may negotiate with incumbent licensees as defined in § 90.693 operating on frequencies in Spectrum Blocks A, B, and C for the purpose of agreeing to terms under which the incumbents would relocate their operations to other frequencies in the 800 MHz band, or alternatively, would accept a sharing arrangement with the EA licensee that may result in an otherwise impermissible level of interference to the incumbent licensee's operations. EA licensees may also negotiate agreements for relocation of the incumbents' facilities within Spectrum Blocks A, B or C in which all interested parties agree to the relocation of the incumbent's facilities elsewhere within these bands. "All interested parties" includes the incumbent licensee, the EA licensee requesting and paying for the relocation, and any EA licensee of the spectrum to which the incumbent's facilities are to be relocated.

(b) The relocation mechanism consists of two phases that must be completed before an EA licensee may proceed to request the involuntary relocation of an incumbent licensee.

(1) *Voluntary negotiations.* There is a one year voluntary period during which an EA licensee and an incumbent may negotiate any mutually agreeable relocation agreement. The Commission will announce the commencement of the first phase voluntary period by Public Notice. EA licensees must notify incumbents operating on frequencies included in their spectrum block of their intention to relocate such incumbents within 90 days of the release of the Public Notice that commences the voluntary negotiation period. Failure on the part of the EA licensee to notify the incumbent licensee during this 90 period of its intention to relocate the incumbent will result in the forfeiture of the EA li-

cence's right to request involuntary relocation of the incumbent at any time in the future.

(2) *Mandatory negotiations.* If no agreement is reached by the end of the voluntary period, a one-year mandatory negotiation period will begin during which both the EA licensee and the incumbent must negotiate in "good faith." Failure on the part of the EA licensee to negotiate in good faith during this mandatory period will result in the forfeiture of the EA licensee's right to request involuntary relocation of the incumbent at any time in the future.

(c) *Involuntary relocation procedures.* If no agreement is reached during either the voluntary or mandatory negotiating periods, the EA licensee may request involuntary relocation of the incumbent's system. In such a situation, the EA licensee must:

(1) Guarantee payment of relocation costs, including all engineering, equipment, site and FCC fees, as well as any legitimate and prudent transaction expenses incurred by the incumbent licensee that are directly attributable to an involuntary relocation, subject to a cap of two percent of the hard costs involved. Hard costs are defined as the actual costs associated with providing a replacement system, such as equipment and engineering expenses. EA licensees are not required to pay incumbent licensees for internal resources devoted to the relocation process. EA licensees are not required to pay for transaction costs incurred by incumbent licensees during the voluntary or mandatory periods once the involuntary period is initiated, or for fees that cannot be legitimately tied to the provision of comparable facilities;

(2) Complete all activities necessary for implementing the replacement facilities, including engineering and cost analysis of the relocation procedure and, if radio facilities are used, identifying and obtaining, on the incumbents' behalf, new frequencies and frequency coordination; and

(3) Build the replacement system and test it for comparability with the existing 800 MHz system.

(d) *Comparable facilities.* The replacement system provided to an incumbent during an involuntary relocation must

be at least equivalent to the existing 800 MHz system with respect to the following four factors:

(1) *System.* System is defined functionally from the end user's point of view (*i.e.*, a system is comprised of base station facilities that operate on an integrated basis to provide service to a common end user, and all mobile units associated with those base stations). A system may include multiple-licensed facilities that share a common switch or are otherwise operated as a unitary system, provided that the end user has the ability to access all such facilities. A system may cover more than one EA if its existing geographic coverage extends beyond the EA borders.

(2) *Capacity.* To meet the comparable facilities requirement, an EA licensee must relocate the incumbent to facilities that provide equivalent channel capacity. We define channel capacity as the same number of channels with the same bandwidth that is currently available to the end user. For example, if an incumbent's system consists of five 50 kHz (two 25 kHz paired frequencies) channels, the replacement system must also have five 50 kHz channels. If a different channel configuration is used, it must have the same overall capacity as the original configuration. Comparable channel capacity requires equivalent signaling capability, baud rate, and access time. In addition, the geographic coverage of the channels must be coextensive with that of the original system.

(3) *Quality of service.* Comparable facilities must provide the same quality of service as the facilities being replaced. Quality of service is defined to mean that the end user enjoys the same level of interference protection on the new system as on the old system. In addition, where voice service is provided, the voice quality on the new system must be equal to the current system. Finally, reliability of service is considered to be integral to defining quality of service. Reliability is the degree to which information is transferred accurately within the system. Reliability is a function of equipment failures (*e.g.*, transmitters, feed lines, antennas, receivers, battery back-up power, etc.) and the availability of the frequency channel due to propagation

characteristics (*e.g.*, frequency, terrain, atmospheric conditions, radio-frequency noise, etc.) For digital data systems, this will be measured by the percent of time the bit error rate exceeds the desired value. For analog or digital voice transmissions, this will be measured by the percent of time that audio signal quality meets an established threshold. If analog voice system is replaced with a digital voice system the resulting frequency response, harmonic distortion, signal-to-noise ratio, and reliability will be considered.

(4) *Operating costs.* Operating costs are those costs that affect the delivery of services to the end user. If the EA licensee provides facilities that entail higher operating cost than the incumbent's previous system, and the cost increase is a direct result of the relocation, the EA licensee must compensate the incumbent for the difference. Costs associated with the relocation process can fall into several categories. First, the incumbent must be compensated for any increased recurring costs associated with the replacement facilities (*e.g.*, additional rental payments, increased utility fees). Second, increased maintenance costs must be taken into consideration when determining whether operating costs are comparable. For example, maintenance costs associated with analog systems may be higher than the costs of digital equipment because manufacturers are producing mostly digital equipment and analog replacement parts can be difficult to find. An EA licensee's obligation to pay increased operating costs will end five years after relocation has occurred.

(e) If an EA licensee cannot provide comparable facilities to an incumbent licensee as defined in this section, the incumbent licensee may continue to operate its system on a primary basis in accordance with the provisions of this rule part.

(f) *Cost-sharing plan for 800 MHz SMR EA licensees.* EA licensees are required to relocate the existing 800 MHz SMR licensee in these bands if interference to the existing incumbent operations would occur. All EA licensees who benefit from the spectrum clearing by other EA licensees must contribute, on a *pro rata* basis to such relocation

costs. EA licensees may satisfy this requirement by entering into private cost-sharing agreements or agreeing to terms other than those specified in this section. However, EA licensees are required to reimburse other EA licensees that incur relocation costs and are not parties to the alternative agreement as defined in this section.

(1) *Pro rata formula.* EA licensees who benefit from the relocation of the incumbent must share the relocation costs on a *pro rata* basis. For purposes of determining whether an EA licensee benefits from the relocation of an incumbent, benefitted will be defined as any EA licensee that:

(i) Notifies incumbents operating on frequencies included in their spectrum block of their intention to relocate such incumbents within 90 days of the release of the Public Notice that commences the voluntary negotiation period; or

(ii) Fails to notify incumbents operating on frequencies included in their spectrum block of their intention to relocate such incumbents within 90 days of the release of the Public Notice that commences the voluntary negotiation period, but subsequently decides to use the frequencies included in their spectrum block. EA licensees who do not participate in the relocation process will be prohibited from invoking mandatory negotiations or any of the provisions of the Commission's mandatory relocation guidelines. EA licensees who do not provide notice to the incumbent, but subsequently decide to use the frequencies in their EA will be required to reimburse, outside of the Commission's mandatory relocation guidelines, those EA licensees who have established a reimbursement right pursuant to paragraph (f)(3) of this section.

(2) *Triggering a reimbursement obligation.* An EA licensee's reimbursement obligation is triggered by:

(i) Notification (*i.e.*, files a copy of the relocation notice and proof of the incumbent's receipt of the notice to the Commission within ten days of receipt), to the incumbent within 90 days of the release of the Public Notice commencing the voluntary negotiation period of its intention to relocate the incumbent; or

(ii) An EA licensee who does not provide notification within 90 days of the release of the Public Notice commencing the voluntary negotiation period, but subsequently decides to use the channels that were relocated by other EA licensees.

(3) *Triggering a reimbursement right.* In order for the EA licensee to trigger a reimbursement right, the EA licensee must notify (*i.e.*, files a copy of the relocation notice and proof of the incumbent's receipt of the notice to the Commission within ten days of receipt), the incumbent of its intention to relocate the incumbent within 90 days of the release of the Public Notice commencing the voluntary negotiation period, and subsequently negotiate and sign a relocation agreement with the incumbent. An EA licensee who relocates a channel outside of its licensed EA (*i.e.*, one that is in another frequency block or outside of its market area), is entitled to *pro rata* reimbursement from non-notifying EA licensees who subsequently exercise their right to the channels based on the following formula:

$$C_i = T_c \times \frac{C_{hj}}{TCh}$$

C_i equals the amount of reimbursement

T_c equals the actual cost of relocating the incumbent

TCh equals the total number of channels that are being relocated

C_{hj} equals the number of channels that each respective EA licensee will benefit from

(4) *Payment issues.* EA licensees who benefit from the relocation of the incumbent will be required to submit their *pro rata* share of the relocation expense to EA licensees who have triggered a reimbursement right and have incurred relocation costs as follows:

(i) For an EA licensee who, within 90 days of the release of the Public Notice announcing the commencement of the voluntary negotiation period, provides notice of its intention to relocate the incumbent, but does not participate or incur relocation costs in the relocation process, will be required to reimburse those EA licensees who have triggered a reimbursement right and have incurred relocation costs during the relocation process, its *pro rata* share when the channels of the incumbent have

been cleared (*i.e.*, the incumbent has been fully relocated and the channels are free and clear).

(ii) For an EA licensee who does not, within 90 days of the release of the Public Notice announcing the commencement of the voluntary negotiation period, provide notice to the incumbent of its intention to relocate and does not incur relocation costs during the relocation process, but subsequently decides to use the channels in its EA, will be required to submit its *pro rata* share payment to those EA licensees who have triggered a reimbursement right and have incurred relocation costs during the relocation process prior to commencing testing of its system.

(5) *Sunset of reimbursement rights.* EA licensees who do not trigger a reimbursement obligation as set forth in paragraph (f)(2) of this section, shall not be required to reimburse EA licensees who have triggered a reimbursement right as set forth in paragraph (f)(3) of this section ten (10) years after the voluntary negotiation period begins for EA licensees (*i.e.*, ten (10) years after the Commission releases the Public Notice commencing the voluntary negotiation period).

(6) *Resolution of disputes that arise during relocation.* Disputes arising out of the costs of relocation, such as disputes over the amount of reimbursement required, will be encouraged to use expedited ADR procedures. ADR procedures provide several alternative methods such as binding arbitration, mediation, or other ADR techniques.

(7) *Administration of the cost-sharing plan.* We will allow for an industry supported, not-for-profit clearinghouse to be established for purposes of administering the cost-sharing plan adopted for the 800 MHz SMR relocation procedures.

[62 FR 41217, July 31, 1997]

Subpart T—Regulations Governing Licensing and Use of Frequencies in the 220–222 MHz Band

SOURCE: 56 FR 19603, Apr. 29, 1991, unless otherwise noted.

§ 90.701 Scope.

(a) Frequencies in the 220–222 MHz band are available for land mobile and fixed use for both Government and non-Government operations. This subpart sets out the regulations governing the licensing and operation of non-Government systems operating in the 220–222 MHz band. It includes eligibility requirements, application procedures, and operational and technical standards for stations licensed in these bands. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflicts, the provisions of this subpart shall govern with respect to licensing and operation in this frequency band.

(b)(1) Licensees granted initial authorizations for operations in the 220–222 MHz band from among applications filed on or before May 24, 1991 are referred to in this subpart as “Phase I” licensees;

(2) Applicants that filed initial applications for operations in the 220–222 MHz band on or before May 24, 1991 are referred to in this subpart as “Phase I” applicants; and

(3) All assignments, operations, stations, and systems of licensees granted authorizations from among applications filed for operations in the 220–222 MHz band on or before May 24, 1991 are referred to in this subpart as “Phase I” assignments, operations, stations, and systems, respectively.

(c)(1) Licensees granted initial authorizations for operations in the 220–222 MHz band from among applications filed after May 24, 1991 are referred to in this subpart as “Phase II” licensees;

(2) Applicants that filed initial applications for operations in the 220–222 MHz band after May 24, 1991 are referred to in this subpart as “Phase II” applicants; and

(3) All assignments, operations, stations, and systems of licensees granted authorizations from among applications filed for operations in the 220–222 MHz band after May 24, 1991 are referred to in this subpart as “Phase II” assignments, operations, stations, and systems, respectively.

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(d) The rules in this subpart apply to both Phase I and Phase II licensees, applicants, assignments, operations, stations, and systems, unless otherwise specified.

[62 FR 15993, Apr. 3, 1997]

§ 90.703 Eligibility.

The following persons are eligible for licensing in the 220–222 MHz band.

(a) Any person eligible for licensing under subparts B or C of this part.

(b) Any person proposing to provide communications service to any person eligible for licensing under subparts B or C of this part, on a not-for-profit, cost-shared basis.

(c) Any person eligible under this part proposing to provide on a commercial basis, station and ancillary facilities for the use of individuals, federal government agencies and persons eligible for licensing under subparts B or C of this part.

[56 FR 19603, Apr. 29, 1991, as amended at 60 FR 15495, Mar. 24, 1995; 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, § 90.703 was amended by revising paragraphs (a), (b), and (c), effective Oct. 17, 1997.

§ 90.705 Forms to be used.

Phase II applications for EA, Regional, or Nationwide radio facilities under this subpart must be prepared in accordance with §§ 90.1009 and 90.1013. Phase II applications for radio facilities operating on public safety/mutual aid channels (Channels 161 through 170) or emergency medical channels (Channels 181 through 185) under this subpart must be prepared on FCC Form 600 and submitted or filed in accordance with § 90.127.

[62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, § 90.705 was revised, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 90.705 Forms to be used.

Phase II applications for EA, Regional, or Nationwide radio facilities under this subpart must be prepared in accordance with §§ 90.1009 and 90.1013. Phase II applications for radio facilities operating on public safety/mutual aid channels (Channels 161 through 170) or Emergency Medical Radio Service

channels (Channels 181 through 185) under this subpart must be prepared on FCC Form 600 and submitted or filed in accordance with § 90.127.

[62 FR 15993, Apr. 3, 1997]

§ 90.709 Special limitations on amendment of applications and on assignment or transfer of authorizations licensed under this subpart.

(a) Except as indicated in paragraph (b) of this section, the Commission will not consent to the following:

(1) Any request to amend an application so as to substitute a new entity as the applicant;

(2) Any application to assign or transfer a license for a Phase I, non-nationwide system prior to the completion of construction of facilities; or

(3) Any application to transfer or assign a license for a Phase I nationwide system before the licensee has constructed at least 40 percent of the proposed system pursuant to the provisions of § 90.725(a) or § 90.725(h), as applicable.

(b) The Commission will grant the applications described in paragraph (a) of this section if:

(1) the request to amend an application or to transfer or assign a license does not involve a substantial change in the ownership or control or the applicant; or

(2) The changes in the ownership or control of the applicant are involuntary due to the original applicant's insolvency, bankruptcy, incapacity, or death.

(c) The assignee or transferee of a Phase I nationwide system is subject to the construction benchmarks and reporting requirements of § 90.725. The assignee or transferee of a Phase I nationwide system is not subject to the entry criteria described in § 90.713.

(d) A licensee may not partially assign any authorization granted pursuant to the subpart.

(e) The assignee or transferee of a Phase II system is subject to the provisions of § 90.1017 and § 1.2111(a) of this chapter.

[56 FR 19603, Apr. 29, 1991, as amended at 57 FR 32449, July 22, 1992; 62 FR 15993, Apr. 3, 1997]

§ 90.711 Processing of Phase II applications.

(a) Phase II applications for authorizations on Channels 166 through 170 and Channels 181 through 185 will be processed on a first-come, first-served basis. When multiple applications are filed on the same day for these frequencies in the same geographic area, and insufficient frequencies are available to grant all applications (*i.e.*, if all applications were granted, violation of the station separation provisions of § 90.723(i) would result), these applications will be considered mutually exclusive and will be subject to random selection procedures pursuant to § 1.972 of this chapter.

(1) All applications will first be considered to determine whether they are substantially complete and acceptable for filing. If so, they will be assigned a file number and put in pending status. If not, they will be dismissed.

(2) Except as otherwise provided in this section, all applications in pending status will be processed in the order in which they are received, determined by the date on which the application was received by the Commission in its Gettysburg, Pennsylvania office (or the address set forth at § 1.1102 of this chapter for applications requiring the fees established by part 1, subpart G of this chapter).

(3) Each application that is accepted for filing will then be reviewed to determine whether it can be granted. Frequencies will be assigned by the Commission pursuant to the provisions of § 90.723.

(4) An application which is dismissed will lose its place in the processing line.

(5) If an application is returned for correction and resubmitted and received by the Commission within 60 days from the date on which it was returned to the applicant, it will retain its place in the processing line. If it is not received within 60 days, it will lose its place in the processing line.

(b) All applications for Channels 161 through 165 that comply with the applicable rules of this part shall be granted. Licensees operating on such channels shall cooperate in the selection and use of frequencies and resolve

any instances of interference in accordance with the provisions of § 90.173.

(c) Phase II applications for authorization on all non-Government channels other than Channels 161 through 170 and 181 through 185 shall be processed in accordance with the provisions of subpart W of this part.

[62 FR 15993, Apr. 3, 1997]

§ 90.713 Entry criteria.

(a) As set forth in § 90.717, four 5-channel blocks are available for nationwide, commercial use to non-Government, Phase I applicants. Applicants for these nationwide channel blocks must comply with paragraphs (b), (c), and (d) of this section.

(b)(1) An applicant must include certification that, within ten years of receiving a license, it will construct a minimum of one base station in at least 70 different geographic areas designated in the application; that base stations will be located in a minimum of 28 of the 100 urban areas listed in § 90.741; and that each base station will have all five assigned nationwide channels constructed and placed in operation (regularly interacting with mobile and/or portable units).

(2) An applicant must include certification that it will meet the construction requirements set forth in § 90.725.

(3) An applicant must include a ten-year schedule detailing plans for construction of the proposed system.

(4) An applicant must include an itemized estimate of the cost of constructing 40 percent of the system and operating the system during the first four years of the license term.

(5) An applicant must include proof that the applicant has sufficient financial resources to construct 40 percent of the system and operate the proposed land mobile system for the first four years of the license term; *i.e.*, that the applicant has net current assets sufficient to cover estimated costs or a firm financial commitment sufficient to cover estimated costs.

(c) An applicant relying on personal or internal resources for the showing required in paragraph (b) of this section must submit independently audited financial statements certified within one year of the date of the application showing net current assets

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sufficient to meet estimated construction and operating costs. An applicant must also submit an unaudited balance sheet, current within 60 days of the date of submission, that clearly shows the continued availability of sufficient net current assets to construct and operate the proposed system, and a certification by the applicant or an officer of the applicant organization attesting to the validity of the balance sheet.

(d) An applicant submitting evidence of a firm financial commitment for the showing required in paragraph (b) of this section must obtain the commitment from a bona fide commercially acceptable source, *e.g.*, a state or federally chartered bank or savings and loan institution, other recognized financial institution, the financial arm of a capital equipment supplier, or an investment banking house. If the lender is not a state or federally chartered bank or savings and loan institution, other recognized financial institution, the financial arm of a capital equipment supplier, or an investment banking house, the lender must also demonstrate that it has funds available to cover the total commitments it has made. The lender's commitment shall contain a statement that the lender:

(1) Has examined the financial condition of the applicant including an audited financial statement, and has determined that the applicant is credit-worthy;

(2) Has examined the financial viability of the proposed system for which the applicant intends to use the commitment; and

(3) Is willing, if the applicant is seeking a Phase I, commercial nationwide license, to provide a sum to the applicant sufficient to cover the realistic and prudent estimated costs of construction of 40 percent of the system and operation of the system for the first four years of the license term.

(e) A Phase II applicant for authorization in a geographic area for Channels 166 through 170 in the public safety/mutual aid category may not have any interest in another pending application in the same geographic area for Channels 166 through 170 in the public safety/mutual aid category, and a Phase II applicant for authorization in a geographic area for channels in the

emergency medical category may not have any interest in another pending application in the same geographic area for channels in the emergency medical category.

[62 FR 15994, Apr. 3, 1997, as amended at 62 FR 18935, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18935, Apr. 17, 1997, § 90.713 was amended by revising paragraph (e), effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 90.713 Entry criteria.

* * * * *

(e) A Phase II applicant for authorization in a geographic area for Channels 166 through 170 in the public safety/mutual aid category may not have any interest in another pending application in the same geographic area for Channels 166 through 170 in the public safety/mutual aid category, and a Phase II applicant for authorization in a geographic area for channels in the Emergency Medical Radio Service (EMRS) category may not have any interest in another pending application in the same geographic area for channels in the EMRS category.

§ 90.715 Frequencies available.

(a) The following table indicates the channel designations of frequencies available for assignment to eligible applicants under this subpart. Frequencies shall be assigned in pairs, with base station frequencies taken from the 220-221 MHz band with corresponding mobile and control station frequencies being 1 MHz higher and taken from the 221-222 MHz band. Only the lower half of the frequency pair(s) is listed in the table. Use of these frequencies in the Mexican and Canadian border areas is subject to coordination with those countries. See paragraph (c) of this section for special provisions concerning use in the Mexico border area.

TABLE OF 220-222 MHz CHANNEL DESIGNATIONS

Channel No.	Base frequency (MHz)
1	220.0025
20075
30125
40175
50225
60275
70325

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TABLE OF 220–222 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
8 .....	.0375
9 .....	.0425
10 .....	.0475
11 .....	.0525
12 .....	.0575
13 .....	.0625
14 .....	.0675
15 .....	.0725
16 .....	.0775
17 .....	.0825
18 .....	.0875
19 .....	.0925
20 .....	.0975
21	220.1025
22 .....	.1075
23 .....	.1125
24 .....	.1175
25 .....	.1225
26 .....	.1275
27 .....	.1325
28 .....	.1375
29 .....	.1425
30 .....	.1475
31 .....	.1525
32 .....	.1575
33 .....	.1625
34 .....	.1675
35 .....	.1725
36 .....	.1775
37 .....	.1825
38 .....	.1875
39 .....	.1925
40 .....	.1975
41	220.2025
42 .....	.2075
43 .....	.2125
44 .....	.2175
45 .....	.2225
46 .....	.2275
47 .....	.2325
48 .....	.2375
49 .....	.2425
50 .....	.2475
51 .....	.2525
52 .....	.2575
53 .....	.2625
54 .....	.2675
55 .....	.2725
56 .....	.2775
57 .....	.2825
58 .....	.2875
59 .....	.2925
60 .....	.2975
61	220.3025
62 .....	.3075
63 .....	.3125
64 .....	.3175
65 .....	.3225
66 .....	.3275
67 .....	.3325
68 .....	.3375
69 .....	.3425
70 .....	.3475
71 .....	.3525
72 .....	.3575
73 .....	.3625
74 .....	.3675
75 .....	.3725
76 .....	.3775
77 .....	.3825

TABLE OF 220–222 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
78 .....	.3875
79 .....	.3925
80 .....	.3975
81	220.4025
82 .....	.4075
83 .....	.4125
84 .....	.4175
85 .....	.4225
86 .....	.4275
87 .....	.4325
88 .....	.4375
89 .....	.4425
90 .....	.4475
91 .....	.4525
92 .....	.4575
93 .....	.4625
94 .....	.4675
95 .....	.4725
96 .....	.4775
97 .....	.4825
98 .....	.4875
99 .....	.4925
100 .....	.4975
101	220.5025
102 .....	.5075
103 .....	.5125
104 .....	.5175
105 .....	.5225
106 .....	.5275
107 .....	.5325
108 .....	.5375
109 .....	.5425
110 .....	.5475
111 .....	.5525
112 .....	.5575
113 .....	.5625
114 .....	.5675
115 .....	.5725
116 .....	.5775
117 .....	.5825
118 .....	.5875
119 .....	.5925
120 .....	.5975
121	220.6025
122 .....	.6075
123 .....	.6125
124 .....	.6175
125 .....	.6225
126 .....	.6275
127 .....	.6325
128 .....	.6375
129 .....	.6425
130 .....	.6475
131 .....	.6525
132 .....	.6575
133 .....	.6625
134 .....	.6675
135 .....	.6725
136 .....	.6775
137 .....	.6825
138 .....	.6875
139 .....	.6925
140 .....	.6975
141	220.7025
142 .....	.7075
143 .....	.7125
144 .....	.7175
145 .....	.7225
146 .....	.7275
147 .....	.7325

TABLE OF 220–222 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
148 .....	.7375
149 .....	.7425
150 .....	.7475
151 .....	.7525
152 .....	.7575
153 .....	.7625
154 .....	.7675
155 .....	.7725
156 .....	.7775
157 .....	.7825
158 .....	.7875
159 .....	.7925
160 .....	.7975
161	220.8025
162 .....	.8075
163 .....	.8125
164 .....	.8175
165 .....	.8225
166 .....	.8275
167 .....	.8325
168 .....	.8375
169 .....	.8425
170 .....	.8475
171 .....	.8525
172 .....	.8575
173 .....	.8625
174 .....	.8675
175 .....	.8725
176 .....	.8775

TABLE OF 220–222 MHz CHANNEL
DESIGNATIONS—Continued

Channel No.	Base frequency (MHz)
177 .....	.8825
178 .....	.8875
179 .....	.8925
180 .....	.8975
181	220.9025
182 .....	.9075
183 .....	.9125
184 .....	.9175
185 .....	.9225
186 .....	.9275
187 .....	.9325
188 .....	.9375
189 .....	.9425
190 .....	.9475
191 .....	.9525
192 .....	.9575
193 .....	.9625
194 .....	.9675
195 .....	.9725
196 .....	.9775
197 .....	.9825
198 .....	.9875
199 .....	.9925
200	220.9975

(b) The 200 channels are divided into three sub-bands as follows:

Channel No.	Sub-band	Frequencies (MHz)
1–40	A	220.0025–220.1975/221.0025–221.1975
41–160	C	220.2025–220.7975/221.2025–221.7975
161–200	B	220.8025–220.9975/221.8025–221.9975

(c) U.S./Mexico border area. (1) Channels 16–30, 45–60, 76–90, 106–120, 136–145, 156–165, 178–194 are available for primary use within the United States within 120 km (74.6 mi) of the Mexican border, subject to the power and antenna height conditions specified in § 90.729 and the use restrictions specified in §§ 90.717–90.721.

(2) Channels 195–200 are available to both the United States and Mexico in the border area on an unprotected basis. Use is limited to a maximum effective radiated power (ERP) of 2 watts and a maximum antenna height of 6.1 meters (20 ft) above ground.

(3) Channels allotted for primary Mexican use (1–15, 31–45, 61–75, 91–105, 121–135, 146–155, and 166–177) may be used in the border area subject to the condition that the power flux density not exceed –86 dB(W/m²) at or beyond any point on the border. Stations operating under this provision will be considered secondary and will not be

granted protection from harmful interference from stations that have primary use of the frequencies.

[56 FR 19603, Apr. 29, 1991, as amended at 57 FR 55148, Nov. 24, 1992]

§ 90.717 Channels available for nationwide systems in the 220–222 MHz band.

(a) Channels 51–60, 81–90, and 141–150 are 10-channel blocks available to non-Government applicants only for nationwide Phase II systems.

(b) Channels 21–25, 26–30, 151–155, and 156–160 are 5-channel blocks available to non-Government applicants only for nationwide, commercial Phase I systems.

(c) Channels 111–115 and 116–120 are 5-channel blocks available for Government nationwide use only.

[62 FR 15994, Apr. 3, 1997]

§ 90.719 Individual channels available for assignment in the 220–222 MHz band.

(a) Channels 171 through 200 are available to both Government and non-Government Phase I applicants, and may be assigned singly or in contiguous channel groups.

(b) Channels 171 through 180 are available for any use by Phase I applicants consistent with this subpart.

(c) Channels 181 through 185 are set aside in Phase II for emergency medical use for applicants that meet the eligibility criteria of § 90.20(a)(1)(iii) or § 90.20(a)(2)(xiii).

(d) Channels 161 through 170 and 181 through 185 are the only 220–222 MHz channels available to Phase II non-nationwide, Government users.

[62 FR 15994, Apr. 3, 1997, as amended at 62 FR 18936, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18936, Apr. 17, 1997, § 90.719 was amended by revising paragraph (c), effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 90.719 Individual channels available for assignment in the 220–222 MHz band.

* * * * *

(c) Channels 181 through 185 are set aside for Phase II Emergency Medical Radio Service (EMRS) use under subpart B of this part.

* * * * *

§ 90.720 Channels available for public safety/mutual aid.

(a) Part 90 licensees who meet the eligibility criteria of §§ 90.20(a)(1), 90.20(a)(2)(i), 90.20(a)(2)(ii), 90.20(a)(2)(iii), 90.20(a)(2)(iv), 90.20(a)(2)(vii), 90.20(a)(2)(ix), or 90.20(a)(2)(xiii) are authorized by this rule to use mobile and/or portable units on Channels 161–170 throughout the United States, its territories, and possessions to transmit:

(1) Communications relating to the immediate safety of life;

(2) Communications to facilitate interoperability among entities eligible under §§ 90.20(a)(1), 90.20(a)(2)(i), 90.20(a)(2)(ii), 90.20(a)(2)(iii), 90.20(a)(2)(iv), 90.20(a)(2)(vii), 90.20(a)(2)(ix), and 90.20(a)(2)(xiii); or

(3) Communications on behalf of and by members of organizations established for disaster relief purposes having an emergency radio communications plan (*i.e.*, licensees eligible under § 90.20(a)(2)(vii)) for the transmission of communications relating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of emergency conditions during periods of actual or impending emergency, or disaster, until substantially normal conditions are restored; for limited training exercises incidental to an emergency radio communications plan, and for necessary operational communications of the disaster relief organization or its chapter affiliates.

(b) Any Government entity and any non-Government entity eligible to obtain a license under §§ 90.20(a)(1), 90.20(a)(2)(i), 90.20(a)(2)(ii), 90.20(a)(2)(iii), 90.20(a)(2)(iv), 90.20(a)(2)(vii), 90.20(a)(2)(ix), or 90.20(a)(2)(xiii) is also eligible to obtain a license for base/mobile operations on Channels 161 through 170. Base/mobile or base/portable communications on these channels that do not relate to the immediate safety of life or to communications interoperability among the above-specified entities, may only be conducted on a secondary non-interference basis to such communications.

[62 FR 18936, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18936, Apr. 17, 1997, § 90.720 was revised, effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 90.720 Channels available for public safety/mutual aid.

(a) Part 90 licensees whose licenses reflect a two-letter radio service code beginning with the letter “P” (except for licensees whose licenses reflect a two-letter radio service code beginning with the letters “PS” and are not eligible under §§ 90.35, 90.37, 90.41, and 90.45) are authorized by this rule to use mobile and/or portable units on Channels 161–170 throughout the United States, its territories, and possessions to transmit:

(1) Communications relating to the immediate safety of life;

(2) Communications to facilitate interoperability among public safety entities and Special Emergency Radio Service (SERS) entities eligible under §§ 90.35, 90.37, 90.41 and 90.45; or

(3) Communications on behalf of and by members of organizations established for disaster relief purposes having an emergency radio communications plan (*i.e.*, licensees eligible under §90.41) for the transmission of communications relating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of emergency conditions during periods of actual or impending emergency, or disaster, until substantially normal conditions are restored; for limited training exercises incidental to an emergency radio communications plan, and for necessary operational communications of the disaster relief organization or its chapter affiliates.

(b) Any Government entity and any non-Government entity eligible to obtain a license under subpart B of this part or eligible to obtain a license under §§90.35, 90.37, 90.41 and 90.45 is also eligible to obtain a license for base/mobile operations on Channels 161 through 170. Base/mobile or base/portable communications on these channels that do not relate to the immediate safety of life or to communications interoperability among public safety entities and the above-specified SERS entities, may only be conducted on a secondary non-interference basis to such communications.

[62 FR 15994, Apr. 3, 1997]

§ 90.721 Other channels available for non-nationwide systems in the 220–222 MHz band.

(a) The channel groups listed in the following Table are available to both Government and non-Government Phase I applicants for trunked operations or operations of equivalent or greater efficiency for non-commercial or commercial operations.

TABLE 1—PHASE I TRUNKED CHANNEL GROUPS

Group No.	Channel Nos.
1	1–31–61–91–121
2	2–32–62–92–122
3	3–33–63–93–123
4	4–34–64–94–124
5	5–35–65–95–125
6	6–36–66–96–126
7	7–37–67–97–127
8	8–38–68–98–128
9	9–39–69–99–129
10	10–40–70–100–130
11	11–41–71–101–131
12	12–42–72–102–132
13	13–43–73–103–133
14	14–44–74–104–134
15	15–45–75–105–135
16	16–46–76–106–136
17	17–47–77–107–137
18	18–48–78–108–138
19	19–49–79–109–139
20	20–50–80–110–140

(b) The channels listed in the following Table are available to non-Government applicants for Phase II assignments in Economic Areas (EAs) and Regional Economic Area Groupings (REAGs) (*see* §§90.761 and 90.763).

TABLE 2—PHASE II EA AND REGIONAL CHANNEL ASSIGNMENTS

Assignment	Assignment area	Group Nos. (from table 1)	Channel Nos.
A	EA	2 and 13.	171–180
B	EA	3 and 16.	
C	EA	5 and 18.	
D	EA	8 and 19.	
E	EA	.....
F	REAG	1, 6, and 11.	186–200
G	REAG	4, 9, and 14.	
H	REAG	7, 12, and 17.	
I	REAG	10, 15, and 20.	
J	REAG	.....

[62 FR 15995, Apr. 3, 1997]

§ 90.723 Selection and assignment of frequencies.

(a) Phase II applications for frequencies in the 220–222 MHz band shall specify whether their intended use is for 10-channel nationwide systems, 10-channel EA systems, 15-channel Regional systems, public safety/mutual aid use, or emergency medical use. Phase II applicants for frequencies for public safety/mutual aid use or emergency medical use shall specify the number of frequencies requested. All frequencies in this band will be assigned by the Commission.

(b) Phase II channels will be assigned pursuant to §§90.717, 90.719, 90.720, 90.721, 90.761 and 90.763.

(c) Phase II applicants for public safety/mutual aid and emergency medical channels will be assigned only the number of channels justified to meet their requirements.

(d) Phase I base or fixed station receivers utilizing 221–222 MHz frequencies assigned from Sub-band A as designated in §90.715(b) will be geographically separated from those Phase I base or fixed station transmitters utilizing 220–221 MHz frequencies removed 200 kHz or less and assigned from Sub-band B as follows:

GEOGRAPHIC SEPARATION OF SUB-BAND A;
BASE OR FIXED STATION RECEIVERS AND
SUB-BAND B; BASE OR FIXED STATION
TRANSMITTERS EFFECTIVE

Separation distance (kilometers)	Radiated power (watts) ¹
0.0–0.3	(²)
0.3–0.5	5
0.5–0.6	10
0.6–0.8	20
0.8–2.0	25
2.0–4.0	50
4.0–5.0	100
5.0–6.0	200
Over 6.0	500

¹ Transmitter peak envelope power shall be used to determine effective radiated power.

² Stations separated by 0.3 km or less shall not be authorized. This table does not apply to the low-power channels 196–200. See § 90.729(c).

(e) Phase II licensees authorized on 220–221 MHz frequencies assigned from Sub-band B will be required to geographically separate their base station or fixed station transmitters from the base station or fixed station receivers of Phase I licensees authorized on 221–222 MHz frequencies 200 kHz removed or less in Sub-band A in accordance with the Table in paragraph (d) of this section.

(f) Phase II licensees with base or fixed stations transmitting on 220–221 MHz frequencies assigned from Sub-band B and Phase II licensees with base or fixed station stations receiving on Sub-band A 221–222 MHz frequencies, if such transmitting and receiving frequencies are 200 kHz or less removed from one another, will be required to coordinate the location of their base stations or fixed stations to avoid interference and to cooperate to resolve any instances of interference in accordance with the provisions of § 90.173(b).

(g) A mobile station is authorized to transmit on any frequency assigned to its associated base station. Mobile units not associated with base stations (see § 90.720(a)) must operate on “mobile” channels.

(h) A licensee’s fixed station is authorized to transmit on any of the licensee’s assigned base station frequencies or mobile station frequencies.

(i) Except for nationwide assignments, the separation of co-channel Phase I base stations, or fixed stations transmitting on base station fre-

quencies, shall be 120 kilometers. Except for Phase I licensees seeking license modification in accordance with the provisions of §§ 90.751 and 90.753, shorter separations between such stations will be considered by the Commission on a case-by-case basis upon submission of a technical analysis indicating that at least 10 dB protection will be provided to an existing Phase I station’s predicted 38 dBu signal level contour. The existing Phase I station’s predicted 38 dBu signal level contour shall be calculated using the F(50,50) field strength chart for Channels 7–13 in § 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential. The 10 dB protection to the existing Phase I station’s predicted 38 dBu signal level contour shall be calculated using the F(50,10) field strength chart for Channels 7–13 in § 73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.

[62 FR 15995, Apr. 3, 1997, as amended at 62 FR 18936, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18936, Apr. 17, 1997, § 90.723 was amended by revising paragraphs (a) and (c), effective Oct. 17, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 90.723 Selection and assignment of frequencies.

(a) Phase II applications for frequencies in the 220–222 MHz band shall specify whether their intended use is for 10-channel nationwide systems, 10-channel EA systems, 15-channel Regional systems, public safety/mutual aid use, or EMRS use. Phase II applicants for frequencies for public safety/mutual aid use or EMRS use shall specify the number of frequencies requested. All frequencies in this band will be assigned by the Commission.

* * * * *

(c) Phase II applicants for public safety/mutual aid and EMRS channels will be assigned only the number of channels justified to meet their requirements.

* * * * *

§ 90.725 Construction requirements for Phase I licensees.

(a) Licensees granted commercial nationwide authorizations will be required to construct base stations having a minimum of five assigned nationwide channels and place those base stations in operation as follows:

(1) In at least 10 percent of the geographic areas designated in the application within two years of initial license grant, including base stations in at least seven urban areas listed in § 90.741 of this part;

(2) In at least 40 percent of the geographic areas designated in the application within four years of initial license grant, including base stations in at least 28 urban areas listed in § 90.741 of this part;

(3) In at least 70 percent of the geographic areas designated in the application within six years of initial license grant, including base stations in at least 28 urban areas listed in § 90.741 of this part;

(4) In all geographic areas designated in the application within ten years of initial license grant, including base stations in at least 28 urban areas listed in § 90.741 of this part.

(b) Licensees not meeting the two and four year criteria shall lose the entire authorization, but will be permitted a six month period to convert the system to non-nationwide channels, if such channels are available.

(c) Licensees not meeting the six and ten year criteria shall lose the authorizations for the facilities not constructed, but will retain exclusivity for constructed facilities.

(d) Each commercial nationwide licensee must file a system progress report on or before the anniversary date of the grant of its license after 2, 4, 6 and 10 years, demonstrating compliance with the relevant construction benchmark criteria.

(1) An overall status report of the system, that must include, but need not be limited to:

(i) A list of all sites at which base stations have been constructed, with antenna heights and effective radiated power specified for each site;

(ii) A list of all other known base station sites at which construction has not been completed; and

(iii) A construction and operational schedule for the next five-year period, including any known changes to the plan for construction and operation submitted with the licensee's original application for the system.

(2) An analysis of the system's compliance with the requirements of paragraph (a) of this section, with documentation to support representations of completed construction, including, but not limited to:

(i) Equipment purchase orders and contracts;

(ii) Lease or purchase contracts relating to antenna site arrangements;

(iii) Equipment and antenna identification (serial) numbers; and

(iv) Service agreements and visits.

(e) Beginning with its second license term, each nationwide licensee must file a progress report once every five years on the anniversary date of the grant of the first renewal of its authorization, including the information required by paragraph (d)(1) of this section.

(f) Licensees authorized Phase I non-nationwide systems, or authorized on Channels 161 through 170 or Channels 181 through 185, must construct their systems (*i.e.*, have all specified base stations constructed with all channels) and place their systems in operation, or commence service in accordance with the provisions of § 90.167, within twelve months of the initial license grant date. Authorizations for systems not constructed and placed in operation, or having commenced service, within twelve months from the date of initial license grant cancel automatically.

(g) A licensee that loses authorization for some or all of its channels due to failure to meet construction deadlines or benchmarks may not reapply for nationwide channels in the same category or for non-nationwide channels in the same category in the same geographic area for one year from the date the Commission takes final action affirming that those channels have been cancelled.

(h) The requirements and conditions of paragraphs (a) through (e) and paragraph (g) of this section apply to nationwide licensees that construct and

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operate stations for fixed or paging operations on a primary basis instead of, or in addition to, stations for land mobile operations on a primary basis except that, in satisfying the base station construction and placed in operation requirements of paragraph (a) of this section and the system progress report requirements of paragraphs (d) and (e) of this section, licensees operating stations for fixed operation on a primary basis instead of, or in addition to, stations for land mobile or paging operations on a primary basis in a given geographic area may demonstrate how such fixed stations are providing substantial service to the public in those geographic areas.

[56 FR 19603, Apr. 29, 1991, as amended at 56 FR 32517, July 17, 1991; 57 FR 32450, July 22, 1992; 58 FR 36363, July 7, 1993; 62 FR 15996, Apr. 3, 1997]

§ 90.727 Extended implementation schedules for Phase I licensees.

Except for nationwide and commercial systems, a period of up to three (3) years may be authorized for constructing and placing a system in operation if:

(a) The applicant submits justification for an extended implementation period. The justification must include reasons for requiring an extended construction period, the proposed construction schedule (with milestones), and must show either that:

(1) The proposed system will serve a large fleet of mobile units and will involve a multi-year cycle for its planning, approval, funding, purchase, and construction; or

(2) The proposed system will require longer than 8 months to place in operation because of its purpose, size, or complexity; or

(3) The proposed system is to be part of a coordinated or integrated area-wide system which will require more than 8 months to construct; or

(4) The applicant is a local governmental agency and demonstrates that the government involved is required by law to follow a multi-year cycle for planning, approval, funding, and purchasing the proposed system.

(b) Authorizations under this section are conditioned upon the licensee's compliance with the submitted ex-

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tended implementation schedule. Failure to meet the schedule will result in loss of authorizations for facilities not constructed.

[56 FR 19603, Apr. 29, 1991, as amended at 56 FR 32517, July 17, 1991]

§ 90.729 Limitations on power and antenna height.

(a) The permissible effective radiated power (ERP) with respect to antenna heights for land mobile, paging, or fixed stations transmitting on frequencies in the 220-221 MHz band shall be determined from the following Table. These are maximum values and applicants are required to justify power levels requested.

ERP VS. ANTENNA HEIGHT TABLE ²

Antenna height above average terrain (HAAT), meters	Effective radiated power, watts ¹
Up to 150	500
150 to 225	250
225 to 300	125
300 to 450	60
450 to 600	30
600 to 750	20
750 to 900	15
900 to 1050	10
Above 1050	5

¹ Transmitter PEP shall be used to determine ERP.

² These power levels apply to stations used for land mobile, paging, and fixed operations.

(b) The maximum permissible ERP for mobile units is 50 watts. Portable units are considered as mobile units. Licensees operating fixed stations or paging base stations transmitting on frequencies in the 221-222 MHz band may not operate such fixed stations or paging base stations at power levels greater than 50 watts ERP, and may not transmit from antennas that are higher than 7 meters above ground, except that transmissions from antennas that are higher than 7 meters above ground will be permitted if the effective radiated power of such transmissions is reduced below 50 watts ERP by $20 \log_{10}(h/7)$ dB, where h is the height of the antenna above ground, in meters.

(c) Base station and fixed station transmissions on base station transmit Channels 196-200 are limited to 2 watts ERP and a maximum antenna height of 6.1 meters (20 ft) above ground. Licensees authorized on these channels may

operate at power levels above 2 watts ERP or with a maximum antenna height greater than 6.1 meters (20 ft) above ground if:

(1) They obtain the concurrence of all Phase I and Phase II licensees with base stations or fixed stations receiving on base station receive Channels 1-40 and located within 6 km of their base station or fixed station; and

(2) Their base station or fixed station is not located in the United States/Mexico or United States/Canada border areas.

[62 FR 15996, Apr. 3, 1997]

§ 90.733 Permissible operations.

(a) Systems authorized in the 220-222 MHz band may be used:

(1)(i) For government and non-government land mobile operations, *i.e.*, for base/mobile and mobile relay transmissions, on a primary basis; or

(ii) For the following operations instead of or in addition to a licensee's land mobile operations: One-way or two-way paging operations on a primary basis by all non-Government Phase II licensees, fixed operations on a primary basis by all non-Government Phase II licensees and all Government licensees, one-way or two-way paging or fixed operations on a primary basis by all non-Government Phase I licensees, except that before a non-Government Phase I licensee may operate one-way or two-way paging or fixed systems on a primary basis instead of or in addition to its land mobile operations, it must meet the following requirements:

(A) A nationwide Phase I licensee must;

(1) Meet its two-year benchmark for the construction of its land mobile system base stations as prescribed in § 90.725(a); and

(2) Provide a new 10-year schedule, as required in § 90.713(b)(3), for the construction of the fixed and/or paging system it intends to construct instead of, or in addition to, its nationwide land mobile system; and

(3) Certify that the financial showings and all other certifications provided in demonstrating its ability to construct and operate its nationwide land mobile system, as required in §§ 90.713 (b), (c) and (d), remain applica-

ble to the nationwide system it intends to construct consisting of fixed and/or paging operations on a primary basis instead of, or in addition to, its land mobile operations; or

(4) In lieu of providing the requirements of paragraph (a)(1)(ii)(A)(3) of this section, provide the financial showings and all other certifications required in §§ 90.713 (b), (c) and (d) to demonstrate its ability to construct and operate a nationwide system consisting of fixed and/or paging operations on a primary basis instead of, or in addition to, its land mobile operations.

(B) A non-nationwide Phase I licensee must first meet the requirement to construct its land mobile base station and place it in operation, or commence service (in accordance with § 90.167) as prescribed in § 90.725(f) or § 90.727, as applicable.

(2) Only by persons who are eligible for facilities under either this subpart or in the pools included in subpart B or C of this part.

(3) Except for licensees classified as CMRS providers under part 20 of this chapter, only for the transmission of messages or signals permitted in the services in which the participants are eligible.

(b) See § 90.720 of this part for permissible operations on mutual aid channels.

(c) For operations requiring less than a 4 kHz bandwidth, more than a single emission may be utilized within the authorized bandwidth. In such cases, the frequency stability requirements of § 90.213 do not apply, but the out-of-band emission limits of § 90.210(f) must be met.

(d) Licensees, except for licensees authorized on Channels 161 through 170 and 181 through 185, may combine any number of their authorized, contiguous channels to form channels wider than 5 kHz. In so doing, licensees must comply with the following spectrum efficiency standard, which will remain in effect through December 31, 2001:

(1) For voice communications, licensees must employ equipment that provides at least one voice channel per 5 kHz of channel bandwidth; and

(2) For data communications, licensees must employ equipment that operates at a data rate of at least 4,800 bits per second per 5 kHz of channel bandwidth.

(3) Licensees authorized on channels other than Channels 161 through 170 and 181 through 185 may combine any number of their authorized, contiguous channels to form channels wider than 5 kHz *without* complying with the spectrum efficiency standard identified in paragraphs (d)(1) and (d)(2) of this section if they operate with equipment that has been granted type acceptance in accordance with the provisions of § 90.203(k)(2).

(e) In combining authorized contiguous channels to form channels wider than 5 kHz, the emission limits in § 90.210(f) must be met only at the outermost edges of the contiguous channels. Transmitters shall be tested to confirm compliance with this requirement with the transmission located as close to the band edges as permitted by the design of the transmitter. The frequency stability requirements in § 90.213 shall apply only to the outermost of the contiguous channels authorized to the licensee. However, the frequency stability employed for transmissions operating inside the outermost contiguous channels must be such that the emission limits in § 90.210(f) are met over the temperature and voltage variations prescribed in § 2.995 of this chapter.

(f) A Phase I non-nationwide licensee operating a paging base station, or a fixed station transmitting on frequencies in the 220–221 MHz band, may only operate such stations at the coordinates of the licensee's authorized land mobile base station.

(g) The transmissions of a Phase I non-nationwide licensee's paging base station, or fixed station transmitting on frequencies in the 220–221 MHz band, must meet the requirements of §§ 90.723 (d) and (i), and 90.729, and such a station must operate at the effective radiated power and antenna height-above-average-terrain prescribed in the licensee's land mobile base station authorization.

(h) Licensees using 220–222 MHz spectrum for geophysical telemetry operations are authorized to operate fixed

stations on a secondary, non-interference basis to licensees operating in the 220–222 MHz band on a primary basis under the conditions that such licensees:

(1) Provide notification of their operations to co-channel non-nationwide Phase I licensees with an authorized base station, or fixed station transmitting on frequencies in the 220–221 MHz band, located within 45 km of the secondary licensee's station, to co-channel, Phase II EA or Regional licensee authorized to operate in the EA or REAG in which the secondary licensee's station is located, and to co-channel Phase I or Phase II nationwide licensees;

(2) Operate only at temporary locations in accordance with the provisions of § 90.137;

(3) Not transmit at a power level greater than one watt ERP;

(4) Not transmit from an antenna higher than 2 meters (6.6 feet) above ground; and

(5) Not operate on Channels 111 through 120, 161 through 170, or 181 through 185.

(i) All licensees constructing and operating base stations or fixed stations on frequencies in the 220–222 MHz band must:

(1) Comply with any rules and international agreements that restrict use of their authorized frequencies, including the provisions of § 90.715 relating to U.S./Mexican border areas;

(2) Comply with the provisions of § 17.6 of this chapter with regard to antenna structures; and

(3) Comply with the provisions of §§ 1.1301 through 1.1319 of this chapter with regard to actions that may or will have a significant impact on the quality of the human environment.

[56 FR 19603, Apr. 29, 1991, as amended at 56 FR 32517, July 17, 1991; 57 FR 32450, July 22, 1992; 59 FR 59967, Nov. 21, 1994; 62 FR 15997, Apr. 3, 1996; 62 FR 18936, Apr. 17, 1997]

EFFECTIVE DATE NOTE: At 62 FR 18936, Apr. 17, 1997, § 90.733 was amended by revising paragraph (a)(2), effective Oct. 17, 1997.

§ 90.735 Station identification.

(a) Except for nationwide systems authorized in the 220–222 MHz band, station identification is required pursuant to § 90.425 of this part.

(b) Trunked systems shall employ an automatic device to transmit the call sign of the base station at 30 minute intervals. The identification shall be made on the lowest frequency in the base station trunked group assigned to the licensee. If this frequency is in use at the time identification is required, the identification may be made at the termination of the communication in progress on this frequency.

(c) Station identification may be by voice or International Morse Code. If the call sign is transmitted in International Morse Code, it must be at a rate of between 15 to 20 words per minute, and by means of tone modulation of the transmitter, with the tone frequency being between 800 and 1000 hertz.

(d) Digital transmissions may also be identified by digital transmission of the station call sign. A licensee that identifies its station in this manner must provide the Commission, upon its request, information (such as digital codes and algorithms) sufficient to decipher the data transmission to ascertain the call sign transmitted.

[56 FR 19603, Apr. 29, 1991, as amended at 62 FR 15997, Apr. 3, 1997]

§ 90.737 Supplemental reports required of Phase I licensees.

(a) Licensees of nationwide systems must submit progress reports pursuant to § 90.725(d) of this part.

(b) Licensees offering service on a commercial basis must maintain records of the names and addresses of each customer and the dates that service commenced and terminated. These records must be made available to the Commission upon request. Such licensees must report at the time of license renewal the number of mobile units being served.

(c) Non-commercial trunked system licensees must report at the time of license renewal the number of mobile units being served.

(d) Except for licensees of nationwide systems, all licensees must report whether construction of the facility has been completed within eight months of the date of initial grant of their respective licenses.

(e) All reports must be filed with the Land Mobile Branch, Licensing Divi-

sion, Wireless Telecommunications Bureau, Gettysburg, PA 17326.

[56 FR 19603, Apr. 29, 1991, as amended at 56 FR 32517, July 17, 1991; 60 FR 50123, Sept. 28, 1995]

§ 90.739 Number of systems authorized in a geographical area.

There is no limit on the number of licenses that may be authorized to a single licensee.

[62 FR 46214, Sept. 2, 1997]

EFFECTIVE DATE NOTE: At 62 FR 46214, Sept. 2, 1997, § 90.739 was revised, effective Oct. 2, 1997. For the convenience of the user, the superseded text is set forth as follows:

§ 90.739 Number of systems authorized in a geographical area.

(a) No licensee will be authorized more than one Phase I system in the 220–222 MHz band in a single category (*i.e.*, one nationwide system, one 5-channel trunked system, one data-only local system of 1 to 5 channels, one unrestricted non-trunked local system of 1 to 5 channels, or one public safety/mutual aid local system of 1 to 5 channels) within 64 kilometers (40 miles) of an existing system authorized to that licensee in the same category, unless the licensee can demonstrate that the additional system is justified on the basis of its communications requirements.

(b) There is no limit on the number of Phase II nationwide, EA or Regional licenses that may be authorized to a single licensee.

[62 FR 15997, Apr. 3, 1997]

§ 90.741 Urban areas for Phase I nationwide systems.

Licensees of Phase I nationwide systems must construct base stations, or fixed stations transmitting on frequencies in the 220–221 MHz band, in a minimum of 28 of the urban areas listed in the following Table within ten years of initial license grant. A base station, or fixed station, is considered to be within one of the listed urban areas if it is within 60 kilometers (37.3 miles) of the specified coordinates.

TABLE

Urban Area	North Latitude	West Lon- gitude
	° ' "	° ' "
New York, New York—Northeastern New Jersey	40 45 06	73 59 39
Los Angeles-Long Beach, California ...	34 03 15	118 14 28
Chicago, Illinois—Northwestern Indiana	41 52 28	87 38 22

TABLE—Continued

Urban Area	North	West Lon-
	Latitude	gitude
	° ' "	° ' "
Philadelphia, Pennsylvania/New Jersey	39 56 58	75 09 21
Detroit, Michigan	42 19 48	83 02 57
Boston, Massachusetts	42 21 24	71 03 25
San Francisco-Oakland, California	37 46 39	122 24 40
Washington, DC/Maryland/Virginia	38 53 51	77 00 33
Dallas-Fort Worth, Texas	32 47 09	96 47 37
Houston, Texas	29 45 26	95 21 37
St. Louis, Missouri/Illinois	38 37 45	90 12 22
Miami, Florida	25 46 37	80 11 32
Pittsburgh, Pennsylvania	40 26 19	80 00 00
Baltimore, Maryland	39 17 26	76 36 45
Minneapolis-St. Paul, Minnesota	44 58 57	93 15 43
Cleveland, Ohio	41 29 51	81 41 50
Atlanta, Georgia	33 45 10	84 23 37
San Diego, California	32 42 53	117 09 21
Denver, Colorado	39 44 58	104 59 22
Seattle-Everett, Washington	47 36 32	122 20 12
Milwaukee, Wisconsin	43 02 19	87 54 15
Tampa, Florida	27 56 58	82 27 25
Cincinnati, Ohio/Kentucky	39 06 07	84 30 35
Kansas City, Missouri/Kansas	39 04 56	94 35 20
Buffalo, New York	42 52 52	78 52 21
Phoenix, Arizona	33 27 12	112 04 28
San Jose, California	37 20 16	121 53 24
Indianapolis, Indiana	39 46 07	86 09 46
New Orleans, Louisiana	29 56 53	90 04 10
Portland, Oregon/Washington	45 31 06	122 40 35
Columbus, Ohio	39 57 47	83 00 17
Hartford, Connecticut	41 46 12	72 40 49
San Antonio, Texas	29 25 37	98 29 06
Rochester, New York	43 09 41	77 36 21
Sacramento, California	38 34 57	121 29 41
Memphis, Tennessee/Arkansas/Mississippi	35 08 46	90 03 13
Louisville, Kentucky/Indiana	38 14 47	85 45 49
Providence-Pawtucket-Warwick, RI/MA	41 49 32	71 24 41
Salt Lake City, Utah	40 45 23	111 53 26
Dayton, Ohio	39 45 32	84 11 43
Birmingham, Alabama	33 31 01	86 48 36
Bridgeport, Connecticut	41 10 49	73 11 22
Norfolk-Portsmouth, Virginia	36 51 10	76 17 21
Albany-Schenectady-Troy, New York ..	42 39 01	73 45 01
Oklahoma City, Oklahoma	35 28 26	97 31 04
Nashville-Davidson, Tennessee	36 09 33	86 46 55
Toledo, Ohio/Michigan	41 39 14	83 32 39
New Haven, Connecticut	41 18 25	72 55 30
Honolulu, Hawaii	21 19 00	157 52 00
Jacksonville, Florida	30 19 44	81 39 42
Akron, Ohio	41 05 00	81 30 44
Syracuse, New York	43 03 04	76 09 14
Worcester, Massachusetts	42 15 37	71 48 17
Tulsa, Oklahoma	36 09 12	95 59 34
Allentown-Bethlehem-Easton, PA/NJ ...	40 36 11	75 28 06
Richmond, Virginia	37 32 15	77 26 09
Orlando, Florida	28 32 42	81 22 38
Charlotte, North Carolina	35 13 44	80 50 45
Springfield-Chicopee-Holyoke, MA/CT ..	42 06 21	72 35 32
Grand Rapids, Michigan	42 58 03	85 40 13
Omaha, Nebraska/Iowa	41 15 42	95 56 14
Youngstown-Warren, Ohio	41 05 57	80 39 02
Greenville, South Carolina	34 50 50	82 24 01
Flint, Michigan	43 00 50	83 41 33
Wilmington, Delaware/New Jersey/Maryland	39 44 46	75 32 51
Raleigh-Durham/North Carolina	35 46 38	78 38 21
West Palm Beach, Florida	26 42 36	80 03 07
Oxnard-Simi Valley-Ventura, California ..	34 12 00	119 11 00
Fresno, California	36 44 12	119 47 11
Austin, Texas	30 16 09	97 44 37

TABLE—Continued

Urban Area	North	West Lon-
	Latitude	gitude
	° ' "	° ' "
Tucson, Arizona	32 13 15	110 58 08
Lansing, Michigan	42 44 01	84 33 15
Knoxville, Tennessee	35 57 39	83 55 07
Baton Rouge, Louisiana	30 26 58	91 11 00
El Paso, Texas	31 45 36	106 29 11
Tacoma, Washington	47 14 59	122 26 15
Mobile, Alabama	30 41 36	88 02 33
Harrisburg, Pennsylvania	40 15 43	76 52 59
Albuquerque, New Mexico	35 05 01	106 39 05
Canton, Ohio	40 47 50	81 22 37
Chattanooga, Tennessee/Georgia	35 02 41	85 18 32
Wichita, Kansas	37 41 30	97 20 16
Charleston, South Carolina	32 46 35	79 55 53
San Juan, Puerto Rico	18 28 00	66 07 00
Little Rock-North Little Rock, Arkansas ..	34 44 42	92 16 37
Las Vegas, Nevada	36 10 20	115 08 37
Columbia, South Carolina	34 00 02	81 02 00
Fort Wayne, Indiana	41 04 21	85 08 26
Bakersfield, California	35 22 31	119 01 16
Davenport-Rock Island-Moline, IA/IL ...	41 31 00	90 35 00
Shreveport, Louisiana	32 30 46	93 44 58
Des Moines, Iowa	41 35 14	93 37 00
Peoria, Illinois	40 41 42	89 35 33
Newport News-Hampton, Virginia	36 59 30	76 26 00
Jackson, Mississippi	32 17 56	90 11 06
Augusta, Georgia/South Carolina	33 28 20	81 58 00
Spokane, Washington	47 39 32	117 25 33
Corpus Christi, Texas	27 47 51	97 23 45
Madison, Wisconsin	43 04 23	89 22 55
Colorado Springs, Colorado	38 50 07	104 49 16

NOTE: The geographic coordinates given are from the Department of Commerce publication of 1947: "Air-line Distances Between Cities in the United States" and from data supplied by the National Geodetic Survey. The coordinates are determined by using the first city mentioned as the center of the urban area.

[56 FR 19603, Apr. 29, 1991, as amended at 56 FR 32517, July 17, 1991; 60 FR 37277, July 19, 1995; 62 FR 15997, Apr. 3, 1997]

§ 90.743 Renewal expectancy.

(a) All licensees seeking renewal of their authorizations at the end of their license term must file a renewal application in accordance with the provisions of § 90.149. Licensees must demonstrate, in their application, that:

(1) They have provided "substantial" service during their past license term. "Substantial" service is defined in this rule as service that is sound, favorable, and substantially above a level of mediocre service that just might minimally warrant renewal; and

(2) They have substantially complied with applicable FCC rules, policies, and the Communications Act of 1934, as amended.

(b) In order to establish its right to a renewal expectancy, a renewal applicant must submit a showing explaining why it should receive a renewal expectancy. At a minimum, this showing must include:

(1) A description of its current service in terms of geographic coverage and population served;

(2) For an EA, Regional, or nationwide licensee, an explanation of its record of expansion, including a timetable of the construction of new stations to meet changes in demand for service;

(3) A description of its investments in its system;

(4) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and

(5) A list of any pending proceedings that relate to any matter described in this paragraph.

(c) Phase I non-nationwide licensees have license terms of 5 years, and therefore must meet these requirements 5 years from the date of initial authorization in order to receive a renewal expectancy. Phase I nationwide licensees and all Phase II licensees have license terms of 10 years, and therefore must meet these requirements 10 years from the date of initial authorization in order to receive a renewal expectancy.

[62 FR 15997, Apr. 3, 1997]

§ 90.751 Minor modifications of Phase I, non-nationwide licenses.

Phase I non-nationwide licensees will be given an opportunity to seek modification of their license to relocate their initially authorized base station, *i.e.*, locate their base station at a site other than its initially authorized location. The conditions under which modifications will be granted and the procedures for applying for license modifications are described in §§ 90.753, 90.755, and 90.757. For CMRS licensees, these modifications will be treated as minor modifications in accordance with § 90.164.

[62 FR 15998, Apr. 3, 1997]

§ 90.753 Conditions of license modification.

(a) Except as provided in paragraphs (b), and (c) of this section, a Phase I non nationwide licensee may modify its authorization to relocate its authorized base station up to one-half the distance over 120 km toward any co-channel licensee's initially authorized base station, to a maximum distance of 8 km.

(b) A Phase I non-nationwide licensee with an authorized base station located outside a Designated Filing Area (DFA) (see Public Notice, DA 86-173, 52 FR 1302 (January 12, 1987)) may modify its authorization to relocate its authorized base station up to one-half the distance over 120 km toward any co-channel licensee's initially authorized base station, to a maximum distance of 25 km, so long as the base station is relocated no more than 8 km inside of any DFA (*i.e.*, no more than 8 km from the nearest DFA boundary line).

(c) A Phase I non-nationwide licensee that has been granted Special Temporary Authority (STA) to operate at an alternative base station location may modify its authorization to seek permanent authorization at that location, regardless of whether locating the station at the STA site is in strict conformance with the provisions of paragraphs (a) and (b) of this section, if the licensee certifies that such a modification is in conformance with §§ 90.723 and 90.729 and:

(1) It has constructed its base station and has placed it in operation, or commenced service, at the STA site on or before January 26, 1996; or

(2) It has taken delivery of its base station transceiver on or before January 26, 1996.

(d) The application of a Phase I non-nationwide licensee proposing a base station modification resulting in less than 120 km separation from a co-channel licensee's initially authorized base station will be accepted by the Commission only with the consent of that co-channel licensee, as evidenced in a letter submitted concurrently with the licensee's application.

(e) The application of a Phase I non-nationwide licensee proposing a base station modification resulting in at least a 120 km separation from each co-

channel licensee's initially authorized base station but more than one-half the distance over 120 km toward any co-channel licensee's initially authorized base station will be accepted by the Commission only with the consent of that co-channel licensee, as evidenced in a letter submitted concurrently with the licensee's application.

[61 FR 3845, Feb. 2, 1996]

§ 90.755 Procedures for license modification.

(a) A Phase I non-nationwide licensee seeking modification of its authorization to relocate its authorized base station in accordance with the provisions of § 90.753 must file the following on or before May 1, 1996:

(1) Form 600 requesting license modification, and providing all applicable information;

(2) Certification that the location of its proposed base station is in conformance with the provisions of § 90.753, or, as provided in § 90.753(d), a letter evidencing consent of a co-channel licensee that the licensee may be authorized less than 120 km from the co-channel licensee;

(3) If applicable, the required certification by a licensee with a Special Temporary Authority, in accordance with § 90.753(c);

(4) If applicable, certification that the licensee has constructed its base station and placed it in operation, or commenced service, at its initially authorized location on or before March 11, 1996.

(b) A licensee seeking modification of its authorization to relocate its base station in accordance with the provisions of § 90.753, should file, on or before March 11, 1996, either a modification application, as provided in paragraph (a) of this section, or a letter certifying to the Commission its intent to file an application to modify its authorization to relocate its base station. For a licensee that has not constructed its authorized base station and placed it in operation, or commenced service, by March 11, 1996, this filing will serve to extend the licensee's construction requirement in accordance with the provisions of § 90.757.

[61 FR 3845, Feb. 2, 1996]

§ 90.757 Construction requirements.

(a) Except as provided in paragraph (b) of this section, a Phase I non-nationwide licensee that is granted modification of its authorization to relocate its base station must construct its base station and place it in operation, or commence service, on all authorized channels on or before August 15, 1996, or within 12 months of initial grant date, whichever is later. The authorization of a licensee that does not construct its base station and place it in operation, or commence service, by this date, cancels automatically and must be returned to the Commission.

(b) A Phase I non-nationwide licensee with a base station authorized at a location north of Line A must construct its base station and place it in operation, or commence service, on all authorized channels within 12 months of initial grant date, or within 12 months of the date of the release of the terms of an agreement between the United States and Canadian governments on the sharing of 220–222 MHz spectrum between the two countries, whichever is later. The authorization of a licensee that does not construct its base station and place it in operation, or commence service, by this date, cancels automatically and must be returned to the Commission.

[61 FR 3845, Feb. 2, 1996]

POLICIES GOVERNING THE LICENSING AND USE OF PHASE II EA, REGIONAL AND NATIONWIDE SYSTEMS

SOURCE: 62 FR 15998, 15999, Apr. 3, 1997, unless otherwise noted.

§ 90.761 EA and Regional licenses.

(a) EA licenses for spectrum blocks listed in Table 2 of § 90.721(b) are available in 175 Economic Areas (EAs) as defined in § 90.7.

(b) Regional licenses for spectrum blocks listed in Table 2 of § 90.721(b) are available in six Regional Economic Area Groupings (REAGs) as defined in § 90.7.

§ 90.763 EA, Regional and nationwide system operations.

(a) A nationwide licensee authorized pursuant to § 90.717(a) may construct and operate any number of land mobile

or paging base stations, or fixed stations, anywhere in the Nation, and transmit on any of its authorized channels, provided that the licensee complies with the requirements of § 90.733(i).

(b) An EA or Regional licensee authorized pursuant to § 90.761 may construct and operate any number of land mobile or paging base stations, or fixed stations, anywhere within its authorized EA or REAG, and transmit on any of its authorized channels, provided that:

(1) The licensee affords protection to all authorized co-channel Phase I non-nationwide base stations as follows:

(i) The EA or Regional licensee must locate its land mobile or paging base stations, or fixed stations transmitting on base station transmit frequencies, at least 120 km from the land mobile or paging base stations, or fixed stations transmitting on base station transmit frequencies, of co-channel Phase I licensees, except that separations of less than 120 km shall be considered on a case-by-case basis upon submission by the EA or Regional licensee of:

(A) A technical analysis demonstrating at least 10 dB protection to the predicted 38 dBu service contour of the co-channel Phase I licensee, *i.e.*, demonstrating that the predicted 28 dBu interfering contour of the EA or Regional licensee's base station or fixed station does not overlap the predicted 38 dBu service contour of the co-channel Phase I licensee's base station or fixed station; or

(B) A written letter from the co-channel Phase I licensee consenting to a separation of less than 120 km, or to less than 10 dB protection to the predicted 38 dBu service contour of the licensee's base station or fixed station.

(ii) The Phase I licensee's predicted 38 dBu service contour referred to in paragraph (a)(1)(i) of this section is calculated using the F(50,50) field strength chart for Channels 7-13 in § 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential, and is based on the licensee's authorized effective radiated power and antenna height-above-average-terrain. The EA or Regional licensee's predicted 28 dBu interfering contour referred to in paragraph (a)(1)(i) of this

section is calculated using the F(50,10) field strength chart for Channels 7-13 in § 73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.

(2) The licensee complies with the requirements of § 90.733(i).

(3) The licensee limits the field strength of its base stations, or fixed stations operating on base station transmit frequencies, in accordance with the provisions of § 90.771.

(4) The licensee notifies the Commission within 30 days of the completion of the addition, removal, relocation or modification of any of its facilities within its authorized area of operation. Such notification must be made by submitting an FCC Form 600, and must include the appropriate filing fee, if any.

(c) In the event that the authorization for a co-channel Phase I base station, or fixed station transmitting on base station transmit frequencies, within an EA or Regional licensee's border is terminated or revoked, the EA or Regional licensee's channel obligations to such stations will cease upon deletion of the facility from the Commission's official licensing records, and the EA or Regional licensee then will be able to construct and operate without regard to the previous authorization.

§ 90.765 Licenses term for Phase II licenses.

Nationwide licenses authorized pursuant to § 90.717(a), EA and Regional licenses authorized pursuant to § 90.761, and non-nationwide licenses authorized pursuant to §§ 90.720 and 90.719(c) will be issued for a term not to exceed ten years.

§ 90.767 Construction and implementation of EA and Regional licenses.

(a) An EA or Regional licensee must construct a sufficient number of base stations (*i.e.*, base stations for land mobile and/or paging operations) to provide coverage to:

(1) At least one-third of the population of its EA or REAG within five years of the issuance of its initial license; and

(2) At least two-thirds of the population of its EA or REAG within ten

years of the issuance of its initial license.

(b) EA and Regional licensees offering fixed services as part of their system, and EA and Regional licensees that have one or more incumbent, co-channel Phase I licensees authorized within their EA or REAG may meet the construction requirements of paragraph (a) of this section by demonstrating an appropriate level of substantial service at their five- and ten-year benchmarks.

(c) Licensees must submit maps or other supporting documents to demonstrate compliance with the construction requirements of paragraphs (a) and (b) of this section.

(d) Failure by an EA or Regional licensee to meet the construction requirements of paragraph (a) or (b) of this section, as applicable, will result in automatic cancellation of its entire EA or Regional license. In such instances, EA or Regional licenses will not be converted to individual, site-by-site authorizations for already constructed stations.

(e) EA and Regional licensees will not be permitted to count the resale of the services of other providers in their EA or REAG, *e.g.*, incumbent, Phase I licensees, to meet the construction requirement of paragraph (a) or (b) of this section, as applicable.

(f) EA and Regional licensees will not be required to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

§ 90.769 Construction and implementation of nationwide licenses.

(a) A nationwide licensee must construct a sufficient number of base stations (*i.e.*, base stations for land mobile and/or paging operations) to provide coverage to:

(1) A composite area of at least 750,000 square kilometers or 37.5 percent of the United States population within five years of the issuance of its initial license; and

(2) A composite area of at least 1,500,000 square kilometers or 75 percent of the United States population within ten years of the issuance of its initial license.

(b) Nationwide licensees offering fixed services as part of their system may meet the construction requirements of paragraph (a) of this section by demonstrating an appropriate level of substantial service at their five- and ten-year benchmarks.

(c) Licensees must submit maps or other supporting documents to demonstrate compliance with the construction requirements of paragraphs (a) and (b) of this section.

(d) Failure by a nationwide licensee to meet the construction requirements of paragraphs (a) or (b) of this section, as applicable, will result in automatic cancellation of its entire nationwide license. In such instances, nationwide licenses will not be converted to individual, site-by-site authorizations for already constructed stations.

(e) Nationwide licensees will not be required to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

§ 90.771 Field strength limits.

(a) The transmissions from base stations, or fixed stations transmitting on base station transmit frequencies, of EA and Regional licensees may not exceed a predicted 38 dBu field strength at their EA or REAG border. The predicted 38 dBu field strength is calculated using the F(50,50) field strength chart for Channels 7–13 in § 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential.

(b) Licensees will be permitted to exceed the predicted 38 dBu field strength required in paragraph (a) of this section if all affected, co-channel EA and Regional licensees agree to the higher field strength.

(c) EA and Regional licensees must coordinate to minimize interference at or near their EA and REAG borders, and must cooperate to resolve any instances of interference in accordance with the provisions of § 90.173(b).

Subpart U—Competitive Bidding Procedures for 900 MHz Specialized Mobile Radio Service

SOURCE: 60 FR 48919, Sept. 21, 1995, unless otherwise noted.

§ 90.801 900 MHz SMR subject to competitive bidding.

Mutually exclusive initial applications to provide 900 MHz SMR service are subject to competitive bidding procedures. The general competitive bidding procedures found in part 1, subpart Q of this chapter will apply unless otherwise provided in this part.

§ 90.802 Competitive bidding design for 900 MHz SMR licensing.

The Commission will employ a simultaneous multiple round auction design when choosing from among mutually exclusive initial applications to provide 900 MHz SMR service, unless otherwise specified by the Wireless Telecommunications Bureau before the auction.

§ 90.803 Competitive bidding mechanisms.

(a) *Sequencing.* The Wireless Telecommunications Bureau will establish and may vary the sequence in which 900 MHz SMR licenses will be auctioned.

(b) *Grouping.* All 900 MHz SMR licenses for each of the MTAs will be auctioned simultaneously, unless the Wireless Telecommunications Bureau announces, by Public Notice prior to the auction, an alternative auction scheme.

(c) *Minimum bid increments.* The Wireless Telecommunications Bureau will, by announcement before or during an auction, require minimum bid increments in dollar or percentage terms.

(d) *Stopping rules.* The Wireless Telecommunications Bureau will establish stopping rules before or during multiple round auctions in order to terminate an auction within a reasonable time.

(e) *Activity rules.* The Wireless Telecommunications Bureau will establish activity rules which require a minimum amount of bidding activity. In the event that the Commission establishes an activity rule in connection with a simultaneous multiple round auction, each bidder will be entitled to request and will be automatically granted a certain number of waivers of such rule during the auction.

§ 90.804 Aggregation of 900 MHz SMR licenses.

The Commission will license each 10-channel block in the 900 MHz SMR spectrum separately. Applicants may aggregate across spectrum blocks within the limitation specified in § 20.6(b) of this chapter.

§ 90.805 Withdrawal, default and disqualification payments.

(a) During the course of an auction conducted pursuant to § 90.802, the Wireless Telecommunications Bureau will impose payments on bidders who withdraw high bids during the course of an auction, who default on payments due after an auction closes, or who are disqualified.

(b) Bid withdrawal prior to close of auction. A bidder who withdraws a high bid during the course of an auction will be subject to a payment equal to the difference between the amount bid and the amount of the winning bid the next time the license is offered by the Commission. No withdrawal payment would be assessed if the subsequent winning bid exceeds the withdrawn bid. This payment amount will be deducted from any upfront payments or down payments that the withdrawing bidder has deposited with the Commission.

(c) Default or disqualification after close of auction. If a high bidder defaults or is disqualified after the close of such an auction, the defaulting bidder will be subject to the payment in paragraph (b) of this section plus an additional payment equal to three (3) percent of the subsequent winning bid. If the subsequent winning bid exceeds the defaulting bidder's bid amount, the 3 percent payment will be calculated based on the defaulting bidder's bid amount. These amounts will be deducted from any upfront payments or down payments that the defaulting or disqualified bidder has deposited with the Commission. If the default occurs within five business days after the bidding has closed, the Commission retains the discretion to offer the license to the second highest bidder at its final bid level, of it that bidder declines the offer, to offer the license to other bidders (in descending order of their bid amounts) at the final bid levels.

§ 90.806 Bidding application (FCC Form 175 and 175-S Short-form).

All applicants to participate in competitive bidding for 900 MHz SMR licenses must submit applications on FCC Forms 175 and 175-S pursuant to the provisions of § 1.2105 of this chapter. The Wireless Telecommunications Bureau will issue a Public Notice announcing the availability of 900 MHz SMR licenses and, in the event that mutually exclusive applications are filed, the date of the auction for those licenses. This Public Notice also will specify the date on or before which applicants intending to participate in a 900 MHz SMR auction must file their applications in order to be eligible for that auction, and it will contain information necessary for completion of the application as well as other important information such as the materials which must accompany the Forms, any filing fee that must accompany the application or any upfront payment that will need to be submitted, and the location where the application must be filed. In addition to identifying its status as a small business or rural telephone company, each applicant must indicate whether it is a minority-owned entity, as defined in § 90.814(g) and/or a women-owned entity.

§ 90.807 Submission of upfront payments and down payments.

(a) Each bidder in the 900 MHz SMR auction will be required to submit an upfront payment of \$0.02 per MHz per pop, for the maximum number of licenses (in terms of MHz-pops) on which it intends to bid pursuant to § 1.2106 of this chapter and procedures specified by Public Notice.

(b) Each winning bidder in the 900 MHz SMR auction shall make a down payment to the Commission in an amount sufficient to bring its total deposits up to 20 percent of its winning bid within five business days after the auction closes, and the remaining balance due on the license shall be paid within five business days after Public Notice announcing that the Commission is prepared to award the license. The grant of the application required by § 90.808 is conditional upon receipt of full payment, except for small businesses that are winning bidders, which

are governed by § 90.811. The Commission generally will grant the license within ten (10) business days after the receipt of the remaining balance due on the license.

§ 90.808 Long-form applications.

Each winning bidder will be required to submit a long-form application on FCC Form 600 within ten (10) business days after being notified by Public Notice that it is the winning bidder. Applications on FCC Form 600 shall be submitted pursuant to the procedures set forth in § 90.119 and any associated Public Notices. Only auction winners (and rural telephone companies and incumbent 900 MHz SMR licensees seeking partitioned licenses pursuant to agreements with auction winners under § 90.813) will be eligible to file applications on FCC Form 600 for initial 900 MHz SMR licenses in the event of mutual exclusivity between applicants filing Form 175.

§ 90.809 License grant, denial, default, and disqualification.

(a) A bidder who withdraws its bid subsequent to the close of bidding, defaults on a payment due, or is disqualified, will be subject to the payments specified in § 90.805 or § 1.2109 of this chapter, as applicable.

(b) MTA licenses pursued through competitive bidding procedures will be granted pursuant to the requirements specified in § 90.166.

§ 90.810 Bidding credits for small businesses.

(a) A winning bidder that qualifies as a small business or a consortium of small businesses, (as defined in § 90.814(b)(1)(i)) may use a bidding credit of 15 percent to lower the cost of its winning bid on any of the blocks identified in § 90.617(d), table 4B. A winning bidder that qualifies as a small business or a consortium of small businesses, (as defined in § 90.814(b)(1)(ii)) may use a bidding credit of 10 percent to lower the cost of its winning bid on any of the blocks identified in § 90.617(d), table 4B.

(b) Unjust Enrichment. (1) A small business seeking transfer or assignment of a license to an entity that is

not a small business under the definitions in § 90.814(b)(1) will be required to reimburse the government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, before transfer will be permitted. The amount of this payment will be reduced over time as follows: a transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit; in year three of the license term the payment will be 75 percent; in year four the payment will be 50 percent and in year five the payment will be 25 percent, after which there will be no assessment. If a small business as defined in § 90.814(b)(1)(i) seeks to transfer or assign a license to a small business as defined in § 90.814(b)(1)(ii), the value of the bidding credit to be repaid is five percent, the difference between the 10 and 15 percent bidding credits. The five percent difference will be subject to the percentage reductions over time specified above. These payments must be paid back to the U.S. Treasury as a condition of approval of the assignment or transfer.

(2) If a small business that utilizes a bidding credit under this section seeks to assign or transfer control of its license to a small business meeting the eligibility standards for lower bidding credits or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this section, the licensee must seek Commission approval and reimburse the government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee or licensee is eligible under this section as a condition of the approval of such assignment, transfer or other ownership change.

§ 90.811 Reduced down payment for licenses won by small businesses.

Each winning bidder that qualifies as a small business shall make a down payment equal to ten percent of its winning bid (less applicable bidding credits); a winning bidder shall bring its total amount on deposit with the

Commission (including upfront payment) to five percent of its net winning bid within five (5) business days after the auction closes, and the remainder of the down payment (five percent) shall be paid within five (5) business days following Public Notice that the Commission is prepared to award the license. The Commission generally will grant the license within ten (10) business days after receipt of the remainder of the down payment.

§ 90.812 Installment payments for licenses won by small businesses.

(a) Each licensee that qualifies as a small business may pay the remaining 90 percent of the net auction price for the license in quarterly installment payments pursuant to § 1.2110(e) of this chapter. Licensees who qualify for installment payments are entitled to pay their winning bid amount in installments over the term of the license, with interest charges to be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. Payments shall include both principal and interest amortized over the term of the license. An MTA license issued to an eligible small business that elects installment payments will be conditioned on the full and timely performance of the license holder's quarterly payments. The additional following terms apply:

(1) An eligible licensee qualifying as a small business under § 90.814(b)(1)(i) may make interest-only payments for five years. Interest will accrue at the Treasury note rate. Payments of interest and principal shall be amortized over the remaining five years of the license term.

(2) An eligible licensee qualifying as a small business under § 90.814(b)(1)(ii) may make interest-only payments for the first two years of the license term. Interest will accrue at the Treasury note rate plus an additional 2.5 percent. Payments of interest and principal shall be amortized over the remaining eight years of the license term.

(b) Unjust Enrichment. (1) If a licensee that utilizes installment financing under this section seeks to assign or transfer control of its license to an entity not meeting the eligibility

standards for installment payments, the licensee must make full payment of the remaining unpaid principal and any unpaid interest accrued through the date of assignment or transfer as a condition of approval.

(2) If a licensee that utilizes installment financing under this section seeks to make any change in ownership structure that would result in the licensee losing eligibility for installment payments, the licensee shall first seek Commission approval and must make full payment of the remaining unpaid principal and any unpaid interest accrued through the date of such change as a condition of approval.

(3) If a licensee that utilizes installment financing under this section seeks to assign or transfer control of a license to an entity that does not qualify for as favorable an installment payment plan, the installment payment plan for which the acquiring entity qualifies will become effective immediately upon transfer.

§ 90.813 Partitioned licenses and disaggregated spectrum.

(a) *Eligibility.* Parties seeking approval for partitioning and disaggregation shall request an authorization for partial assignment of a license pursuant to § 90.153(c).

(b) *Technical standards*—(1) *Partitioning.* In the case of partitioning, requests for authorization for partial assignment of a license must include, as attachments, a description of the partitioned service area and a calculation of the population of the partitioned service area and the licensed geographic service area. The partitioned service area shall be defined by coordinate points at every 3 degrees along the partitioned service area unless an FCC recognized service area is utilized (*i.e.*, Major Trading Area, Basic Trading Area, Metropolitan Service Area, Rural Service Area or Economic Area) or county lines are followed. The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1927 North American Datum (NAD27). Applicants may supply geographical coordinates based on 1983 North American Datum (NAD83) in addition to

those required (NAD27). In the case where an FCC recognized service area or county lines are utilized, applicants need only list the specific area(s) (through use of FCC designations or county names) that constitute the partitioned area.

(2) *Disaggregation.* Spectrum may be disaggregated in any amount.

(3) *Combined partitioning and disaggregation.* The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.

(c) *Unjust enrichment*—(1) *Installment payments.* Licensees that qualified under § 90.812 to pay the net auction price for their licenses in installment payments that partition their licenses or disaggregate their spectrum to entities not meeting the eligibility standards for installment payments, will be subject to the provisions concerning unjust enrichment as set forth in § 90.812(b).

(2) *Bidding credits.* Licensees that qualified under § 90.810 to use a bidding credit at auction that partition their licenses or disaggregate their spectrum to entities not meeting the eligibility standards for such a bidding credit, will be subject to the provisions concerning unjust enrichment as set forth in § 90.810(b).

(3) *Apportioning unjust enrichment payments.* Unjust enrichment payments for partitioned license areas shall be calculated based upon the ratio of the population of the partitioned license area to the overall population of the license area and by utilizing the most recent census data. Unjust enrichment payments for disaggregated spectrum shall be calculated based upon the ratio of the amount of spectrum disaggregated to the amount of spectrum held by the licensee.

(d) *Installment payments*—(1) *Apportioning the balance on installment payment plans.* When a winning bidder elects to pay for its license through an installment payment plan pursuant to § 90.812, and partitions its licensed area or disaggregates spectrum to another party, the outstanding balance owed by

the licensee on its installment payment plan (including accrued and unpaid interest) shall be apportioned between the licensee and partitionee or disaggregatee. Both parties will be responsible for paying their proportionate share of the outstanding balance to the U.S. Treasury. In the case of partitioning, the balance shall be apportioned based upon the ratio of the population of the partitioned area to the population of the entire original license area calculated based upon the most recent census data. In the case of disaggregation, the balance shall be apportioned based upon the ratio of the amount of spectrum disaggregated to the amount of spectrum allocated to the licensed area.

(2) *Parties not qualified for installment payment plans.* (i) When a winning bidder elects to pay for its license through an installment payment plan pursuant to § 90.812, and partitions its license or disaggregates spectrum to another party that would not qualify for an installment payment plan or elects not to pay for its share of the license through installment payments, the outstanding balance owed by the licensee (including accrued and unpaid interest) shall be apportioned according to paragraph (d)(1) of this section.

(ii) The partitionee or disaggregatee shall, as a condition of the approval of the partial assignment application, pay its entire *pro rata* amount within 30 days of Public Notice conditionally granting the partial assignment application. Failure to meet this condition will result in a rescission of the grant of the partial assignment application.

(iii) The licensee shall be permitted to continue to pay its *pro rata* share of the outstanding balance and shall receive new financing documents (promissory note, security agreement) with a revised payment obligation, based on the remaining amount of time on the original installment payment schedule. These financing documents will replace the licensee's existing financing documents which shall be marked "superseDED" and returned to the licensee upon receipt of the new financing documents. The original interest rate, established pursuant to § 1.2110(e)(3)(i) of this chapter at the time of the grant of the initial license in the market, shall

continue to be applied to the licensee's portion of the remaining government obligation. We will require, as a further condition to approval of the partial assignment application, that the licensee execute and return to the U.S. Treasury the new financing documents within 30 days of the Public Notice conditionally granting the partial assignment application. Failure to meet this condition will result in the automatic cancellation of the grant of the partial assignment application.

(iv) A default on the licensee's payment obligation will only affect the licensee's portion of the market.

(3) *Parties qualified for installment payment plans.* (i) Where both parties to a partitioning or disaggregation agreement qualify for installment payments, the partitionee or disaggregatee will be permitted to make installment payments on its portion of the remaining government obligation, as calculated according to paragraph (d)(1) of this section.

(ii) Each party will be required, as a condition to approval of the partial assignment application, to execute separate financing documents (promissory note, security agreement) agreeing to pay their *pro rata* portion of the balance due (including accrued and unpaid interest) based upon the installment payment terms for which they qualify under the rules. The financing documents must be returned to the U.S. Treasury within thirty (30) days of the Public Notice conditionally granting the partial assignment application. Failure by either party to meet this condition will result in the automatic cancellation of the grant of the partial assignment application. The interest rate, established pursuant to § 1.2110(e)(3)(i) of this chapter at the time of the grant of the initial license in the market, shall continue to be applied to both parties' portion of the balance due. Each party will receive a license for their portion of the partitioned market or disaggregated spectrum.

(iii) A default on an obligation will only affect that portion of the market area held by the defaulting party.

(iv) Partitionees and disaggregatees that qualify for installment payment plans may elect to pay some of their

pro rata portion of the balance due in a lump sum payment to the U.S. Treasury and to pay the remaining portion of the balance due pursuant to an installment payment plan.

(e) *License term.* The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in § 90.665(a).

(f) *Construction requirements—(1) Requirements for partitioning.* Parties seeking authority to partition must meet one of the following construction requirements:

(i) The partitionee may certify that it will satisfy the applicable construction requirements set forth in § 90.665 for the partitioned license area; or

(ii) The original licensee may certify that it has or will meet the construction requirements set forth in § 90.665 for the entire market. In that case, the partitionee must only meet the requirements for renewal of its license for the partitioned license area.

(iii) Applications requesting partial assignments of license for partitioning must include a certification by each geographic area 800 MHz SMR licenses in the lower 230 channels will be awarded to small entities, as that term is defined by the SBA.

(iv) Partitionees must submit supporting documents showing compliance with the respective construction requirements within the appropriate time frames set forth in § 90.665.

(v) Failure by any partitionee to meet its respective performance requirements will result in the automatic cancellation of the partitioned or disaggregated license without further Commission action.

(2) *Requirements for disaggregation.* Parties seeking authority to disaggregate must submit with their partial assignment application a certification signed by both parties stating which of the parties will be responsible for meeting the construction requirements for the market as set forth in § 90.665. Parties may agree to share responsibility for meeting the construction requirements. Parties that accept responsibility for meeting the construction requirements and later fail to do so will be subject to license

forfeiture without further Commission action.

[62 FR 41219, July 31, 1997]

§ 90.814 Definitions.

(a) *Scope.* The definitions in this section apply to §§ 90.810 through 90.813, unless otherwise specified in those sections.

(b) *Small business: Consortium of small business:*

(1) A small business is an entity that either:

(i) together with its affiliates, persons or entities that hold attributable interests in such entity, and their affiliates, has average gross revenues that are not more than \$3 million for the preceding three years; or

(ii) together with its affiliates, persons or entities that hold attributable interests in such entity, and their affiliates, has average gross revenues that are not more than \$15 million for the preceding three years.

(2) For purposes of determining whether an entity meets either the \$3 million or \$15 million average annual gross revenues size standard set forth in paragraph (b)(1) of this section, the gross revenues of the entity, its affiliates, persons or entities holding interests in the entity and their affiliates shall be considered on a cumulative basis and aggregated, subject to the exceptions set forth in § 90.814(g).

(3) A small business consortium is a conglomerate organization formed as a joint venture between or among mutually-independent business firms, each of which individually satisfies either definition of a small business in paragraphs (b)(1) and (b)(2) of this section. In a consortium of small businesses, each individual member must establish its eligibility as a small business, as defined in this section.

(c) *Rural telephone company.* A *rural telephone company* is a local exchange carrier having 100,000 or fewer access lines, including all *affiliates*.

(d) *Gross revenues.* For applications filed after December 31, 1994, *gross revenues* shall be evidenced by audited financial statements for the preceding relevant number of calendar or fiscal years. If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by

the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate.

(e) *Businesses owned by members of minority groups and/or women.* A business owned by members of minority groups and/or women in which minorities and/or women who are U.S. citizens control the applicant, have at least 50.1 percent equity ownership and, in the case of a corporate applicant, a 50.1 percent voting interest. For applicants that are partnerships, every general partner either must be a minority and/or woman (or minorities and/or women) who are U.S. citizens and who individually or together own at least 50.1 percent of the partnership equity, or an entity that is 100 percent owned and controlled by minorities and/or women who are U.S. citizens. The interests of minorities and women are to be calculated on a fully-diluted basis; agreements such as stock options and convertible debentures shall be considered to have a present effect on the power to control an entity and shall be treated as if the rights thereunder already have been fully exercised. However, upon a demonstration that options or conversion rights held by non-controlling principals will not deprive the minority and female principals of a substantial financial stake in the venture or impair their rights to control the designated entity, a designated entity may seek a waiver of the requirement that the equity of the minority and female principals must be calculated on a fully-diluted basis.

(f) *Members of minority groups.* *Members of minority groups* includes Blacks, Hispanics, American Indians, Alaskan Natives, Asians, and Pacific Islanders.

(g) *Attributable interests.* Partnership and other ownership interests and any stock interest amounting to 20 percent or more of the equity, or outstanding stock, or outstanding voting stock of a licensee or applicant will be attributable.

(1) *Multiplier.* Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership

percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that if the ownership percentage for an interest in any line in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest.

(2) [Reserved]

(h) *Affiliate.* (1) *Basis for affiliation.* An individual or entity is an affiliate of an applicant or of a person holding an attributable interest in an applicant (both referred to herein as "the applicant") if such individual or entity:

(i) Directly or indirectly controls or has the power to control the applicant, or

(ii) Is directly or indirectly controlled by the applicant, or

(iii) Is directly or indirectly controlled by a third party or parties that also controls or has the power to control the applicant, or

(iv) Has an "identity of interest" with the applicant.

(2) *Nature of control in determining affiliation.* (i) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example for paragraph (h)(2)(i). An applicant owning 50 percent of the voting stock of another concern would have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power of control.

(ii) Control can arise through stock ownership; occupancy of director, officer or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(iii) Control can arise through management positions where a concern's voting stock is so widely distributed that no effective control can be established.

Example for paragraph (h)(2)(iii). In a corporation where the officers and directors own various size blocks totaling 40 percent of the corporation's voting stock, but no officer or director has a block sufficient to give him or her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are persons with attributable interests in the applicant, the other entity will be deemed an affiliate of the applicant.

(3) *Identity of interest between and among persons.* Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or is controlled by a concern, persons with an identity of interest will be treated as though they were one person.

Example 1 for paragraph (h)(3) introductory text. Two shareholders in Corporation Y each have attributable interests in the same SMR application. While neither shareholder has enough shares to individually control Corporation Y, together they have the power to control Corporation Y. The two shareholders with these common investments (or identity or interest) are treated as though they are one person and Corporation Y would be deemed an affiliate of the applicant.

Example 2 for paragraph (h)(3) introductory text. One shareholder in Corporation Y, shareholder A, has an attributable interest in a SMR application. Another shareholder in Corporation Y, shareholder B, has a non-attributable interest in the same SMR application. While neither shareholder has enough shares to individually control Corporation Y, together they have the power to control Corporation Y. Through the common investment of shareholders A and B in the SMR application, Corporation Y would still be deemed an affiliate of the applicant.

(i) *Spousal affiliation.* Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States.

(ii) *Kinship affiliation.* Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context "immediate family member" means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father, or -mother, step-brother, or -sister, step-son, or -daughter, half brother or sister. This presumption may be rebutted by showing that

(A) The family members are estranged,

(B) The family ties are remote, or

(C) The family members are not closely involved with each other in business matters.

Example for paragraph (h)(3)(ii). A owns a controlling interest in Corporation X. A's sister-in-law, B, has an attributable interest in an SMR application. Because A and B have a presumptive kinship affiliation, A's interest in Corporation X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) *Affiliation through stock ownership.*

(i) An applicant is presumed to control or have the power to control a concern if he or she owns or controls or has the power to control 50 percent or more of its voting stock.

(ii) An applicant is presumed to control or have the power to control a concern even though he or she owns, controls or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he or she owns, controls or has the power to control is large as compared with any other outstanding block of stock.

(iii) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(5) *Affiliation arising under stock options, convertible debentures, and agreements to merge.* Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements will generally be treated as though the rights held thereunder had been exercised. However, neither an affiliate nor an applicant can use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1 for paragraph (h)(5). If company B holds an option to purchase a controlling interest in company A, who holds an attributable interest in an SMR application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of Company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (h)(5). If a large company, BigCo, holds 70% (70 to 100 outstanding shares) of the voting stock of company A, who holds an attributable interest in an SMR application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company, and thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule which requires such options to be considered on a fully diluted basis, the option is not considered to have present in this case.

Example 3 for paragraph (h)(5). If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(6) *Affiliation under voting trusts.* (i) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(ii) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(iii) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose regardless of whether it is or is not recognized within the appropriate jurisdiction.

(7) *Affiliation through common management.* Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(8) *Affiliation through common facilities.* Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or where such concerns were formerly affiliated, and through these sharing arrangements one concern has control, or potential control, of the other concern.

(9) *Affiliation through contractual relationships.* Affiliation generally arises where one concern is dependent upon another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(10) *Affiliation under joint venture arrangements.* (i) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in

determining whether the business operation is a joint venture.

(ii) The parties to a joint venture are considered to be affiliated with each other.

§ 90.815 Eligibility for small business status.

(a) *Short-Form Applications: Certifications and Disclosure.* Each applicant for an MTA license which qualifies as a small business or consortium of small businesses shall append the following information as an exhibit to its short-form application (Form 175):

(1) The identity of the applicant's affiliates, persons or entities that hold attributable interests in such entity, and their affiliates, and, if a consortium of small businesses, the members in the joint venture; and

(2) The applicant's gross revenues, computed in accordance with § 90.814.

(b) *Long Form Applications: Certifications and Disclosure.* In addition to the requirements in subpart U of this part, each applicant submitting a long-form application for license(s) and qualifying as a small business shall, in an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed in accordance with § 90.814, for each of the following: the applicant; the applicant's affiliates, the applicant's attributable investors, affiliates of its attributable investors, and, if a consortium of small businesses, the members of the joint venture;

(2) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business under §§ 90.810 through 90.812, including the establishment of *de facto* and *de jure* control; such agreements and instruments include articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements (including letters of intent), oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to ap-

point members to boards of directors or management committees.

(c) *Records Maintenance.* All winning bidders qualifying as small businesses, shall maintain at their principal place of business an updated file of ownership, revenue and asset information, including any documents necessary to establish eligibility as a small business and/or consortium of small businesses under § 90.814. Licensees (and their successors in interest) shall maintain such files for the term of the license.

(d) *Audits.* (1) Applicants and licensees claiming eligibility as a small business or consortium of small businesses under §§ 90.810 through 90.812 shall be subject to audits by the Commission, using in-house and contract resources. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-form application (Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed 900 MHz SMR service and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(e) *Definitions.* The terms *affiliate*, *business owned by members of minority groups and/or women*, *consortium of small businesses*, *gross revenues*, *members of minority groups*, *nonattributable equity*, *small business* and *total assets* used in this section are defined in § 90.814.

§ 90.816 Criteria for comparative 900 MHz SMR renewal proceedings.

(a) *Ultimate issue.* The ultimate issue in comparative renewal proceedings will be to determine, in light of the evidence adduced in the proceeding, what disposition of the applications would best serve the public interest, convenience and necessity.

(b) *Renewal expectancies.* The most important comparative factor to be considered in a comparative 900 MHz SMR renewal proceeding is a major preference, commonly referred to as a "renewal expectancy".

(1) The 900 MHz SMR renewal applicant involved in a comparative renewal proceeding will receive a renewal expectancy, if its past record for the relevant license period demonstrates that:

(i) The renewal applicant has provided "substantial" service during its past license term. "Substantial" service is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal; and

(ii) The renewal applicant has substantially complied with applicable FCC rules, policies and the Communications Act of 1934, as amended.

(2) In order to establish its right to a renewal expectancy, a 900 MHz renewal applicant involved in a comparative renewal proceeding must submit a showing explaining why it should receive a renewal expectancy. At a minimum, this showing must include:

(i) A description of its current service in terms of geographic coverage and population served;

(ii) An explanation of its record of expansion, including a timetable of the construction of new base sites to meet changes in demand for SMR service;

(iii) A description of its investments in its 900 MHz SMR system; and

(iv) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and a list of any pending proceedings that relate to any matter described in paragraph (b)(2) of this section.

(3) In making its showing of entitlement to a renewal expectancy, a renewal applicant may claim credit for any system modification applications that were pending on the date it filed its renewal application. Such credit will not be allowed if the modification application is dismissed or denied.

[60 FR 55485, Nov. 1, 1995]

Subpart V—Competitive Bidding Procedures for 800 MHz Specialized Mobile Radio Service

SOURCE: 61 FR 6159, Feb. 16, 1996, unless otherwise noted.

§ 90.901 800 MHz SMR spectrum subject to competitive bidding.

Mutually exclusive initial applications for Spectrum Blocks A through V in the 800 MHz band are subject to competitive bidding procedures. The general competitive bidding procedures provided in 47 CFR part 1, subpart Q will apply unless otherwise indicated in this subpart.

[62 FR 41220, July 31, 1997]

§ 90.902 Competitive bidding design for 800 MHz SMR licensing.

The Commission will employ a simultaneous multiple round auction design when selecting from among mutually exclusive initial applications for EA licenses for Spectrum Blocks A through V in the 800 MHz band, unless otherwise specified by the Wireless Telecommunications Bureau before the auction.

[62 FR 41220, July 31, 1997]

§ 90.903 Competitive bidding mechanisms.

(a) *Sequencing.* The Wireless Telecommunications Bureau will establish and may vary the sequence in which 800 MHz SMR licenses for Spectrum Blocks A through V will be auctioned.

(b) *Grouping.*—(1) *Spectrum blocks A through C.* All EA licenses for Spectrum Blocks A through C will be auctioned simultaneously, unless the Wireless Telecommunications Bureau announces, by Public Notice prior to the auction, an alternative competitive bidding design.

(2) *Spectrum blocks D through V.* All EA licenses for Spectrum Blocks D through V will be auctioned by the following Regions:

(i) Region 1 (Northeast): The Northeast Region consists of the following MTAs: Boston-Providence, Buffalo-Rochester, New York, Philadelphia, and Pittsburgh.

(ii) Region 2 (South): The South Region consists of the following MTAs: Atlanta, Charlotte-Greensboro-Greenville-Raleigh, Jacksonville, Knoxville, Louisville-Lexington-Evansville, Nashville, Miami-Fort Lauderdale, Richmond-Norfolk, Tampa-St. Petersburg-Orlando, and Washington-Baltimore; and, Puerto Rico and United States Virgin Islands.

(iii) Region 3 (Midwest): The Midwest Region consists of the following MTAs: Chicago, Cincinnati-Dayton, Cleveland, Columbus, Des Moines-Quad Cities, Detroit, Indianapolis, Milwaukee, Minneapolis-St. Paul, and Omaha.

(iv) Region 4 (Central): The Central Region consists of the following MTAs: Birmingham, Dallas-Fort Worth, Denver, El Paso-Albuquerque, Houston, Kansas City, Little Rock, Memphis-Jackson, New Orleans-Baton Rouge, Oklahoma City, San Antonio, St. Louis, Tulsa, and Wichita.

(v) Region 5 (West): The West Region consists of the following MTAs: Honolulu, Los Angeles-San Diego, Phoenix, Portland, Salt Lake City, San Francisco-Oakland-San Jose, Seattle (including Alaska), and Spokane-Billings; and, American Samoa, Guam, and the Northern Mariana Islands.

(c) *Minimum bid increments.* The Wireless Telecommunications Bureau will, by announcement before or during an auction, require minimum bid increments in dollar or percentage terms.

(d) *Stopping rules.* The Wireless Telecommunications Bureau will establish stopping rules before or during the multiple round auctions in order to terminate an auction within a reasonable time.

(e) *Activity rules.* The Wireless Telecommunications Bureau will establish activity rules which require a minimum amount of bidding activity. In the event that the Commission establishes an activity rule in connection with a simultaneous multiple round auction, each bidder will be entitled to request and will be automatically granted a certain number of waivers of such rule during the auction.

(f) *Duration of bidding rounds.* The Wireless Telecommunications Bureau retains the discretion to vary the dura-

tion of bidding rounds or the intervals at which bids are accepted.

[61 FR 6159, Feb. 16, 1996, as amended at 62 FR 41220, July 31, 1997]

§ 90.904 Aggregation of EA licenses.

The Commission will license each Spectrum Block A through V in the 800 MHz band separately. Applicants may aggregate across spectrum blocks within the limitations specified in § 20.6 of this chapter.

[62 FR 41221, July 31, 1997]

§ 90.905 Withdrawal, default and disqualification payments.

(a) During the course of an auction conducted pursuant to § 90.902, the Commission will impose payments on bidders who withdraw high bids during the course of an auction, who default on payments due after an auction closes, or who are disqualified.

(b) *Bid withdrawal prior to close of auction.* A bidder who withdraws a high bid during the course of an auction will be subject to a payment equal to the difference between the amount bid and the amount of the winning bid the next time the license is offered by the Commission. No withdrawal payment would be assessed if the subsequent winning bid exceeds the withdrawn bid. This payment amount will be deducted from any upfront payments or down payments that the withdrawing bidder has deposited with the Commission.

(c) *Default or disqualification after close of auction.* If a high bidder defaults or is disqualified after the close of such an auction, the defaulting bidder will be subject to the payment in paragraph (b) of this section plus an additional monetary assessment equal to three (3) percent of the subsequent winning bid. If the subsequent winning bid exceeds the defaulting bidder's bid amount, the 3 percent payment will be calculated based on the defaulting bidder's bid amount. These amounts will be deducted from any upfront payments or down payments that the defaulting or disqualified bidder has deposited with the Commission. If the default occurs within five (5) business days after the bidding has closed, the Commission retains the discretion to offer the license to the second highest

bidder at its final bid level, or if that bidder declines the offer, to offer the license to other bidders (in descending order of their bid amounts) at the final bid levels.

§ 90.906 Bidding application (FCC Form 175 and 175-S Short-form).

All applicants to participate in competitive bidding for 800 MHz SMR licenses in Spectrum Blocks A through V must submit applications on FCC Forms 175 and 175-S pursuant to the provisions of § 1.2105 of this chapter. The Wireless Telecommunications Bureau will issue a Public Notice announcing the availability of these 800 MHz SMR licenses and, in the event that mutually exclusive applications are filed, the date of the auction for those licenses. This Public Notice also will specify the date on or before which applicants intending to participate in a 800 MHz SMR auction must file their applications in order to be eligible for that auction, and it will contain information necessary for completion of the application as well as other important information such as the materials which must accompany the Forms, any filing fee that must accompany the application or any upfront payment that will need to be submitted, and the location where the application must be filed. In addition to identifying its status as a small business or rural telephone company, each applicant must indicate whether it is a minority-owned entity and/or a women-owned entity, as defined in § 90.912(e).

[62 FR 41221, July 31, 1997]

§ 90.907 Submission of upfront payments and down payments.

(a) *Upfront payments.* Bidders in a 800 MHz SMR auction for Spectrum Blocks A through V will be required to submit an upfront payment prior to the start of the auction. The amount of the upfront payment for each license auctioned and the procedures for submitting it will be set forth by the Wireless Telecommunications Bureau in a Public Notice in accordance with § 1.2106 of this chapter.

(b) *Down payments.* Winning bidders in a 800 MHz SMR auction for Spectrum Blocks A through V must submit a down payment to the Commission in

an amount sufficient to bring their total deposits up to 20 percent of their winning bids within ten (10) business days after the auction closes. Winning bidders will be required to make full payment of the balance of their winning bids ten (10) business days after Public Notice announcing that the Commission is prepared to award the license.

[62 FR 41221, July 31, 1997]

§ 90.908 Long-form applications.

Each winning bidder will be required to submit a long-form application on FCC Form 600 within ten (10) business days after being notified by Public Notice that it is the winning bidder. Applications on FCC Form 600 shall be submitted pursuant to the procedures set forth in § 90.119 of this part and any associated Public Notices. Only auction winners (and rural telephone companies seeking partitioned licenses pursuant to agreements with auction winners under § 90.911) will be eligible to file applications on FCC Form 600 for initial 800 MHz SMR licenses in the event of mutual exclusivity between applicants filing FCC Form 175.

§ 90.909 License grant, denial, default, and disqualification.

(a) Except with respect to entities eligible for installment payments (see § 90.912) each winning bidder will be required to pay the balance of its winning bid in a lump sum payment within five (5) business days following Public Notice that the license is ready for grant. The Commission will grant the license within ten (10) business days after receipt of full and timely payment of the winning bid amount.

(b) A bidder who withdraws its bid subsequent to the close of bidding, defaults on a payment due, or is disqualified, will be subject to the payments specified in § 90.905 or § 1.2109 of this chapter, as applicable.

(c) EA licenses pursued through competitive bidding procedures will be granted pursuant to the requirements specified in § 90.166.

§ 90.910 Bidding credits.

(a) A winning bidder that qualifies as a very small business or a consortium of very small businesses, as defined in

§§ 90.912(b)(2) and (b)(5), may use a bidding credit of 35 percent to lower the cost of its winning bid on Spectrum Blocks A through V. A winning bidder that qualifies as a small business or a consortium of small businesses, as defined in §§ 90.912(b)(1) or (b)(4), may use a bidding credit of 25 percent to lower the cost of its winning bid on Spectrum Blocks A through V.

(b) *Unjust enrichment.* (1) If a small business or very small business (as defined in §§ 90.912(b)(1) and 90.912(b)(2), respectively) that utilizes a bidding credit under this section seeks to assign or transfer control of an authorization to an entity that is not a small business or very small business, or seeks to make any other change in ownership that would result in the licensee losing eligibility as a small business or very small business, the small business or very small business must seek Commission approval and reimburse the government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee, or licensee is eligible under this section as a condition of the approval of such assignment, transfer, or other ownership change.

(2) If a very small business (as defined in § 90.912(b)(2)) that utilizes a bidding credit under this section seeks to assign or transfer control of an authorization to a small business meeting the eligibility standards for a lower bidding credit, or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this section, the licensee must seek Commission approval and reimburse the government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee, or licensee is eligible under this section as a condition of the approval of such assignment, transfer, or other ownership change.

(3) The amount of payments made pursuant to paragraphs (b)(1) and (b)(2) of this section will be reduced over time as follows: a transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or the dif-

ference between the bidding credit obtained by the original licensee and the bidding credit for which the post-transfer licensee is eligible); in year three of the license term the payment will be 75 percent; in year four the payment will be 50 percent; and in year five the payment will be 25 percent, after which there will be no assessment.

[62 FR 41221, July 31, 1997]

§ 90.911 Partitioned licenses and disaggregated spectrum.

(a) *Eligibility.* Parties seeking approval for partitioning and disaggregation shall request an authorization for partial assignment of a license pursuant to § 90.153(c).

(b) *Technical standards*—(1) *Partitioning.* In the case of partitioning, requests for authorization for partial assignment of a license must include, as attachments, a description of the partitioned service area and a calculation of the population of the partitioned service area and the licensed geographic service area. The partitioned service area shall be defined by coordinate points at every 3 degrees along the partitioned service area unless an FCC recognized service area is utilized (*i.e.*, Major Trading Area, Basic Trading Area, Metropolitan Service Area, Rural Service Area or Economic Area) or county lines are followed. The geographic coordinates must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1927 North American Datum (NAD27). Applicants may supply geographical coordinates based on 1983 North American Datum (NAD83) in addition to those required (NAD27). In the case where an FCC recognized service area or county lines are utilized, applicants need only list the specific area(s) (through use of FCC designations or county names) that constitute the partitioned area.

(2) *Disaggregation.* Spectrum may be disaggregated in any amount.

(3) *Combined partitioning and disaggregation.* The Commission will consider requests for partial assignment of licenses that propose combinations of partitioning and disaggregation.

(c) *Unjust enrichment*—(1) *Bidding credits*. Licensees that qualified under § 90.910 to use a bidding credit at auction that partition their licenses or disaggregate their spectrum to entities not meeting the eligibility standards for such a bidding credit, will be subject to the provisions concerning unjust enrichment as set forth in § 90.910(b).

(2) *Apportioning unjust enrichment payments*. Unjust enrichment payments for partitioned license areas shall be calculated based upon the ratio of the population of the partitioned license area to the overall population of the license area and by utilizing the most recent census data. Unjust enrichment payments for disaggregated spectrum shall be calculated based upon the ratio of the amount of spectrum disaggregated to the amount of spectrum held by the licensee.

(d) *License term*. The license term for a partitioned license area and for disaggregated spectrum shall be the remainder of the original licensee's license term as provided for in §§ 90.629(a), 90.665(a) or 90.685(a).

(e) *Construction and channel usage requirements—incumbent licensees*. Parties seeking to acquire a partitioned license or disaggregated spectrum from an incumbent licensee will be required to construct and commence "service to subscribers" all facilities acquired through such transactions within the original construction deadline for each facility as set forth in §§ 90.629 and 90.683. Failure to meet the individual construction deadline will result in the automatic termination of the facility's authorization.

(f) *Construction and channel usage requirements—EA licensees*—(1) *Licensees in channel blocks A, B and C*—(i) *Requirements for partitioning*. (A) The partitionee may certify that it will satisfy the applicable construction requirements set forth in § 90.685(c) for the partitioned license area; or

(B) The original licensee may certify that it has or will meet the three and five year construction requirements set forth in § 90.685(c) for the entire market.

(C) Applications requesting partial assignments of license for partitioning must include a certification by each

party as to which of the above options they select.

(D) Partitionees must submit supporting documents showing compliance with the respective construction requirements within the appropriate time frames set forth in § 90.685(c).

(E) Failure by any partitionee to meet its respective construction requirements will result in the automatic cancellation of the partitioned license without further Commission action.

(ii) *Requirements for disaggregation*. Parties seeking authority to disaggregate spectrum from an EA licensee in Spectrum Blocks A, B and C must meet one of the following channel use requirements:

(A) The partitionee may certify that it will satisfy the channel usage requirements set forth in § 90.685(d) for the disaggregated spectrum; or

(B) The original licensee may certify that it has or will meet the channel usage requirements as set forth in § 90.685(d) for the entire spectrum block. In that case, the disaggregatee must only satisfy the requirements for "substantial service," as set forth in § 90.685(c), for the disaggregated spectrum within five years of the license grant.

(C) Applications requesting partial assignments of license for disaggregation must include a certification by each party as to which of the above options they select.

(D) Disaggregatees must submit supporting documents showing compliance with the respective channel usage requirements within the appropriate time frames set forth in § 90.685(c).

(E) Failure by any disaggregatee to meet its respective channel usage requirements will result in the automatic cancellation of the disaggregated license without further Commission action.

(2) *Licensees in channel blocks D through V*—(i) *Requirements for partitioning*. Parties seeking authority to partition an EA license must meet one of the following construction requirements:

(A) The partitionee may certify that it will satisfy the applicable construction requirements set forth in § 90.685(c) for the partitioned license area; or

(B) The original licensee may certify that it has or will meet the construction requirements set forth in § 90.685(c) for the entire market.

(C) Applications requesting partial assignments of license for partitioning must include a certification by each party as to which of the above options they select.

(D) Partitionees must submit supporting documents showing compliance with the respective construction requirements within the appropriate time frames set forth in § 90.685(c).

(E) Failure by any partitionee to meet its respective construction requirements will result in the automatic cancellation of the partitioned license without further Commission action.

(ii) *Requirements for disaggregation.* Parties seeking authority to disaggregate must submit with their partial assignment application a certification signed by both parties stating which of the parties will be responsible for meeting the construction requirements for the market as set forth in § 90.685. Parties may agree to share responsibility for meeting the construction requirements. Parties that accept responsibility for meeting the construction requirements and later fail to do so will be subject to license forfeiture without further Commission action.

(g) *Certification concerning relocation of incumbent licensees.* Parties seeking approval of a partitioning or disaggregation agreement pursuant to this section must include a certification with their partial assignment of license application as to which party will be responsible for meeting the incumbent relocation requirements set forth at § 90.699.

[62 FR 41221, July 31, 1997]

§ 90.912 Definitions.

(a) *Scope.* The definitions in this section apply to §§ 90.910 and 90.911, unless otherwise specified in those sections.

(b) *Small business; very small business; consortium of small businesses; consortium of very small businesses.* (1) A *small business* is an entity that together with its affiliates and controlling principals, has average gross revenues that do not

exceed \$15 million for the three preceding years; or

(2) A *very small business* is an entity that together with its affiliates and controlling principals, has average gross revenues that do not exceed \$3 million for the three preceding years.

(3) For purposes of determining whether an entity meets the \$3 million or \$15 million average annual gross revenues size standard set forth in paragraph (b)(1) of this section, the gross revenues of the entity, its affiliates, and controlling principals shall be considered on a cumulative basis and aggregated.

(4) A *consortium of small business* is a conglomerate organization formed as a joint venture between or among mutually-independent business firms, each of which individually satisfies the definition of a small business in paragraphs (b)(1) of this section. In a consortium of small businesses, each individual member must establish its eligibility as a small business, as defined in this section.

(5) A *consortium of very small business* is a conglomerate organization formed as a joint venture between or among mutually-independent business firms, each of which individually satisfies the definition of a very small business in paragraph (b)(2) of this section. In a consortium of small businesses, each individual member must establish its eligibility as a very small business, as defined in this section.

(c) *Gross revenues.* Gross revenues shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (e.g., cost of goods sold). Gross revenues are evidenced by audited financial statements for the relevant number of calendar or fiscal years preceding the filing of the applicant's short-form application (FCC Form 175). If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate. When an applicant does not

otherwise use audited financial statements, its gross revenues may be certified by its chief financial officer or its equivalent.

(d) *Affiliate*—(1) *Basis for affiliation.* An individual or entity is an affiliate of an applicant if such individual or entity:

(i) Directly or indirectly controls or has the power to control the applicant, or

(ii) Is directly or indirectly controlled by the applicant, or

(iii) Is directly or indirectly controlled by a third party or parties who also control or have the power to control the applicant, or

(iv) Has an “identity of interest” with the applicant.

(2) *Nature of control in determining affiliation.* (i) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example for paragraph (d)(2)(i) of this section. An applicant owning 50 percent of the voting stock of another concern would have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting stock to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power of control.

(ii) Control can arise through stock ownership; occupancy of director, officer, or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(iii) Control can arise through management positions if the voting stock is so widely distributed that no effective control can be established.

Example for paragraph (d)(2)(iii) of this section. In a corporation where the officers and directors own various size blocks of stock totaling 40 percent of the corporation’s voting

stock, but no officer or director has a block sufficient to give him/her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are controlling principals of the applicant, the other entity will be deemed an affiliate of the applicant.

(3) *Identity of interest between and among persons.* Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or is controlled by a concern, persons with an identity of interest will be treated as though they were one person.

(i) *Spousal affiliation.* Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States.

(ii) *Kinship affiliation.* Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context “immediate family member” means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father or -mother, step-brother or -sister, step-son or -daughter, half-brother or -sister. This presumption may be rebutted by showing that:

(A) The family members are estranged,

(B) The family ties are remote, or

(C) The family members are not closely involved with each other in business matters.

Example for paragraph (d)(3)(ii) of this section. A owns a controlling interest in Corporation X. A’s sister-in-law, B, has a controlling interest in an SMR application. Because A and B have a presumptive kinship affiliation, A’s interest in Corporation X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) *Affiliation through stock ownership.*

(i) An applicant is presumed to control or have the power to control a concern if he/she owns or controls or has the

power to control 50 percent or more of its voting stock.

(ii) An applicant is presumed to control or have the power to control a concern even though he/she owns, controls, or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he/she owns, controls, or has the power to control is large as compared with any other outstanding block of stock.

(iii) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(5) *Affiliation arising under stock options, convertible debentures, and agreements to merge.* Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements will generally be treated as though the rights held thereunder had been exercised. However, neither an affiliate nor an applicant can use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1 for paragraph (d)(5) of this section. If company B holds an option to purchase a controlling interest in company A, who holds a controlling interest in an SMR application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (d)(5) of this section. If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds a controlling interest in an SMR application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company A, and

thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule, which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

Example 3 for paragraph (d)(5) of this section. If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(6) *Affiliation under voting trusts.* (i) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(ii) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(iii) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose regardless of whether it is or is not recognized within the appropriate jurisdiction.

(7) *Affiliation through common management.* Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(8) *Affiliation through common facilities.* Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or where such concerns were formerly affiliated, and through these sharing arrangements one concern has control, or potential control, of the other concern.

(9) *Affiliation through contractual relationships.* Affiliation generally arises where one concern is dependent upon

another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(10) *Affiliation under joint venture arrangements.* (i) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in determining whether the business operation is a joint venture.

(ii) The parties to a joint venture are considered to be affiliated with each other.

[62 FR 41222, July 31, 1997]

§ 90.913 Eligibility for small business status.

(a) *Short-form applications: Certifications and disclosure.* Each applicant for an EA license which qualifies as a small business or consortium of small businesses under §§ 90.912(b) or (c) shall append the following information as an exhibit to its short-form application (FCC Form 175):

(1) The identity of the applicant's affiliates and controlling principals, and, if a consortium of small businesses (or a consortium of very small businesses), the members of the joint venture; and

(2) The applicant's gross revenues, computed in accordance with § 90.912.

(b) *Long-form applications: Certifications and disclosure.* In addition to the requirements in subpart V of this part, each applicant submitting a long-form application for license(s) for Spectrum Blocks A through V and qualifying as a small business shall, in an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed

in accordance with § 90.912, for each of the following: the applicant, the applicant's affiliates, the applicant's controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture;

(2) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business, very small business, consortium of small businesses or consortium of very small businesses under §§ 90.910 and 90.912, including the establishment of *de facto* and *de jure* control; such agreements and instruments include articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements (including letters of intent), oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

(c) *Records maintenance.* All winning bidders qualifying as small businesses or very small businesses, shall maintain at their principal place of business an updated file of ownership, revenue and asset information, including any document necessary to establish eligibility as a small business, very small business and/or consortium of small businesses (or consortium of very small businesses) under § 90.912. Licensees (and their successors in interest) shall maintain such files for the term of the license.

(d) *Audits.* (1) Applicants and licensees claiming eligibility as a small business, very small business or consortium of small businesses (or consortium of very small businesses) under §§ 90.910 and 90.912 shall be subject to audits by the Commission, using in-house and contract resources. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-

form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed 800 MHz SMR service and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(3) *Definitions.* The terms affiliate, small business, very small business consortium of small businesses, consortium of very small businesses, and gross revenues used in this section are defined in § 90.912.

[62 FR 41224, July 31, 1997]

Subpart W—Competitive Bidding Procedures for the 220 MHz Service

SOURCE: 62 FR 15999, Apr. 3, 1997, unless otherwise noted.

§ 90.1001 220 MHz service subject to competitive bidding.

Mutually exclusive initial applications for 220 MHz geographic area licenses are subject to competitive bidding procedures. The procedures set forth in part 1, subpart Q, of this chapter will apply unless otherwise provided in this part.

§ 90.1003 Competitive bidding design for the 220 MHz service.

A simultaneous multiple round auction will be used to choose from among mutually exclusive initial applications for 220 MHz geographic area licenses, unless the Commission specifies otherwise by Public Notice prior to the competitive bidding procedure.

§ 90.1005 Competitive bidding mechanisms.

(a) *Sequencing.* The Commission will establish and may vary the sequence in

which 220 MHz geographic area licenses are auctioned.

(b) *Grouping.* The Commission will determine which licenses will be auctioned simultaneously or in combination.

(c) *Minimum bid increments.* The Commission may, by public announcement before or during an auction, require minimum bid increments in dollar or percentage terms.

(d) *Stopping rules.* The Commission may establish stopping rules before or during an auction in order to terminate the auction within a reasonable time.

(e) *Activity rules.* The Commission may establish activity rules which require a minimum amount of bidding activity. In the event that the Commission establishes an activity rule in connection with a simultaneous multiple round auction, each bidder may request waivers of such rule during the auction. The Commission may, by public announcement either before or during the auction, specify or vary the number of waivers available to each bidder.

§ 90.1007 Withdrawal, default and disqualification payments.

The Commission will impose payments on bidders who withdraw high bids during the course of an auction, who default on payments due after an auction terminates, or who are disqualified. When the Commission conducts a simultaneous multiple round auction, payments will be calculated as set forth in §§ 1.2104(g) and 1.2109 of this chapter. When the amount of such a payment cannot be determined, a deposit of up to 20 percent of the amount bid on the license will be required.

§ 90.1009 Bidding application (FCC Form 175 and 175-S Short-form).

Each applicant to participate in competitive bidding for 220 MHz geographic area licenses must submit an application (FCC Forms 175 and 175-S) pursuant to the provisions of § 1.2105 of this chapter.

§ 90.1011 Submission of upfront payments and down payments.

(a) The Commission will require applicants to submit an upfront payment prior to the start of a 220 MHz service

auction. The amount of the upfront payment for each geographic area license auctioned and the procedures for submitting it will be set forth by the Wireless Telecommunications Bureau in a Public Notice in accordance with § 1.2106 of this chapter.

(b) Each winning bidder in a 220 MHz service auction, except those that qualify as small businesses or very small businesses pursuant to § 90.1021(b)(1) or § 90.1021(b)(2), must submit a down payment to the Commission in an amount sufficient to bring its total deposits up to 20 percent of its winning bid within ten (10) business days following the release of a Public Notice announcing the close of bidding. Small businesses and very small businesses must submit a down payment to the Commission in accordance with § 90.1017(c).

§ 90.1013 Long-form application (FCC Form 600).

Each successful bidder for a 220 MHz geographic area license must submit a long-form application (FCC Form 600) within ten (10) business days after being notified by Public Notice that it is the winning bidder. Applications for 220 MHz geographic area licenses on FCC Form 600 must be submitted in accordance with § 1.2107 of this chapter, all applicable procedures set forth in the rules in this part, and any applicable Public Notices that the Commission may issue in connection with an auction. After an auction, the Commission will not accept long-form applications for 220 MHz geographic area licenses from anyone other than the auction winners and parties seeking partitioned licenses pursuant to agreements with auction winners under § 90.1019.

§ 90.1015 License grant, denial, default, and disqualification.

(a) Each winning bidder, except those eligible for installment payments, will be required to pay the full balance of its winning bid within ten (10) business days following Public Notice that the Commission is prepared to award the license.

(b) A bidder that withdraws its bid subsequent to the close of bidding, defaults on a payment due, or is disqualified, is subject to the payments speci-

fied in § 1.2104(g), § 1.2109 of this chapter and § 90.1007, as applicable.

§ 90.1017 Bidding credits, down payments, and installment payments for small businesses and very small businesses.

(a) *Bidding credits.* A winning bidder that qualifies as a small business or a consortium of small businesses as defined in § 90.1021(b)(1) or § 90.1021(b)(4) may use a bidding credit of 10 percent to lower the cost of its winning bid. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in § 90.1021(b)(2) or § 90.1021(b)(4) may use a bidding credit of 25 percent to lower the cost of its winning bid.

(b) *Unjust enrichment—bidding credits.* (1) If a small business or very small business (as defined in §§ 90.1021(b)(1) and 90.1021(b)(2), respectively) that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to an entity that is not a small business or a very small business, or seeks to make any other change in ownership that would result in the licensee losing eligibility as a small business or very small business, the small business or very small business must seek Commission approval and reimburse the U.S. government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, as a condition of approval of the assignment, transfer, or other ownership change.

(2) If a very small business (as defined in § 90.1021(b)(2)) that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to a small business meeting the eligibility standards for a lower bidding credit, or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this section, the licensee must seek Commission approval and reimburse the U.S. government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee, or licensee is eligible under this section,

plus interest at the rate imposed for installment financing at the time the license was awarded, as a condition of the approval of such assignment, transfer, or other ownership change.

(3) The amount of payments made pursuant to paragraphs (b)(1) and (b)(2) of this section will be reduced over time as follows: A transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or the difference between the bidding credit obtained by the original licensee and the bidding credit for which the post-transfer licensee is eligible); in year 3 of the license term the payment will be 75 percent; in year 4 the payment will be 50 percent; and in year 5 the payment will be 25 percent, after which there will be no assessment.

(c) *Down payments.* Winning bidders in a 220 MHz service auction that qualify as small businesses under § 90.1021(b)(1) or very small businesses under § 90.1021(b)(2) must submit a down payment to the Commission in an amount sufficient to bring their total deposits up to 20 percent of their winning bids. Small businesses and very small businesses must bring their deposit up to 10 percent of their winning bids within ten (10) business days following a Public Notice announcing the close of bidding. Prior to licensing, by a date and time to be specified by Public Notice, they must pay an additional 10 percent.

(d) *Installment payments.* (1) Each licensee that qualifies as a small business under § 90.1021(b)(1) or as a very small business under § 90.1021(b)(2) may pay the remaining 80 percent of the net auction price for the license in installment payments over the term of the geographic area license. Interest charges shall be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. An eligible licensee may make interest-only payments for two years. Payments of interest and principal shall be amortized over the remaining eight years of the license term.

(2) *Late installment payment.* Any licensee that submits a scheduled installment payment more than fifteen days late will be charged a late pay-

ment fee equal to five percent of the amount of the past due payment.

(3) Payments will be applied in the following order: Late charges, interest charges, principal payments.

(e) *Unjust enrichment—installment payments.* (1) If a licensee that utilizes installment financing under this section seeks to assign or transfer control of its license to an entity not meeting the eligibility standards for installment financing, the licensee must seek Commission approval and make full payment of the remaining unpaid principal and unpaid interest accrued through the date of assignment or transfer as a condition of Commission approval.

(2) If a licensee that utilizes installment financing under this section seeks to make any change in ownership structure that would result in the licensee losing eligibility for installment payments, the licensee shall first seek Commission approval before making such a change in ownership structure and must make full payment of the remaining unpaid principal and unpaid interest accrued through the date of such change in ownership structure as a condition of Commission approval.

§ 90.1019 Eligibility for partitioned licenses.

If partitioned licenses are being applied for in conjunction with a license(s) to be awarded through competitive bidding procedures—

(a) The applicable procedures for filing short-form applications and for submitting upfront payments and down payments contained in this chapter shall be followed by the applicant, who must disclose as part of its short-form application all parties to agreement(s) with or among other entities to partition the license pursuant to this section, if won at auction (*see* 47 CFR 1.2105(a)(2)(viii));

(b) Each party to an agreement to partition the license must file a long-form application (FCC Form 600) for its respective, mutually agreed-upon geographic license area together with the application for the remainder of the geographic license area filed by the auction winner.

(c) If the partitioned license is being applied for as a partial assignment of the geographic area license following

grant of the initial license, request for authorization for partial assignment of a license shall be made pursuant to § 90.153.

§ 90.1021 Definitions concerning competitive bidding process.

(a) *Scope.* The definitions in this section apply to §§ 90.1001 through 90.1025, unless otherwise specified in those sections.

(b) *Small business; very small business; consortium of small businesses or very small businesses.* (1) A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.

(3) For purposes of determining whether an entity meets either of the definitions set forth in paragraph (b)(1) or (b)(2) of this section, the gross revenues of the entity, its affiliates, and controlling principals shall be considered on a cumulative basis and aggregated.

(4) A consortium of small businesses (or a consortium of very small businesses) is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (b)(1) of this section or each of which individually satisfies the definition in paragraph (b)(2) of this section. Where an applicant (or licensee) is a consortium of small businesses (or very small businesses), the gross revenues of each small business (or very small business) shall not be aggregated.

(c) *Gross revenues.* Gross revenues shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (e.g., cost of goods sold). Gross revenues are evidenced by audited financial statements for the relevant number of calendar or fiscal years preceding the filing of the applicant's short-form application (FCC Form 175). If an entity was not in exist-

ence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate. When an applicant does not otherwise use audited financial statements, its gross revenues may be certified by its chief financial officer or its equivalent.

(d) *Affiliate*—(1) *Basis for affiliation.* An individual or entity is an affiliate of an applicant if such individual or entity:

(i) Directly or indirectly controls or has the power to control the applicant, or

(ii) Is directly or indirectly controlled by the applicant, or

(iii) Is directly or indirectly controlled by a third party or parties who also control or have the power to control the applicant, or

(iv) Has an "identity of interest" with the applicant.

(2) *Nature of control in determining affiliation.* (i) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example for paragraph (d)(2)(i). An applicant owning 50 percent of the voting stock of another concern would have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting stock to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power of control.

(ii) Control can arise through stock ownership; occupancy of director, officer, or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(iii) Control can arise through management positions if the voting stock is so widely distributed that no effective control can be established.

Example for paragraph (d)(2)(iii). In a corporation where the officers and directors own various size blocks of stock totaling 40 percent of the corporation's voting stock, but no officer or director has a block sufficient to give him/her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are controlling principals of the applicant, the other entity will be deemed an affiliate of the applicant.

(3) *Identity of interest between and among persons.* Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or is controlled by a concern, persons with an identity of interest will be treated as though they were one person.

(i) *Spousal affiliation.* Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States.

(ii) *Kinship affiliation.* Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context "immediate family member" means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father or -mother, step-brother or -sister, step-son or -daughter, half-brother or -sister. This presumption may be rebutted by showing that:

(A) The family members are estranged,

(B) The family ties are remote, or

(C) The family members are not closely involved with each other in business matters.

Example for paragraph (d)(3)(ii). A owns a controlling interest in Corporation X. A's sister-in-law, B, has a controlling interest in a 220 MHz service geographic area license application. Because A and B have a presumptive kinship affiliation, A's interest in Cor-

poration X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) *Affiliation through stock ownership.*

(i) An applicant is presumed to control or have the power to control a concern if he/she owns or controls or has the power to control 50 percent or more of its voting stock.

(ii) An applicant is presumed to control or have the power to control a concern even though he/she owns, controls, or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he/she owns, controls, or has the power to control is large as compared with any other outstanding block of stock.

(iii) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(5) *Affiliation arising under stock options, convertible debentures, and agreements to merge.* Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements will generally be treated as though the rights held thereunder had been exercised. However, neither an affiliate nor an applicant can use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1 for paragraph (d)(5). If company B holds an option to purchase a controlling interest in company A, who holds a controlling interest in a 220 MHz service geographic area license application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (d)(5). If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds a controlling interest in a 220 MHz service geographic area license application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company A, and thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule, which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

Example 3 for paragraph (d)(5). If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(6) *Affiliation under voting trusts.* (i) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(ii) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(iii) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose regardless of whether it is or is not recognized within the appropriate jurisdiction.

(7) *Affiliation through common management.* Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(8) *Affiliation through common facilities.* Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or

where such concerns were formerly affiliated, and through these sharing arrangements one concern has control, or potential control, of the other concern.

(9) *Affiliation through contractual relationships.* Affiliation generally arises where one concern is dependent upon another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(10) *Affiliation under joint venture arrangements.* (i) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in determining whether the business operation is a joint venture.

(ii) The parties to a joint venture are considered to be affiliated with each other.

§ 90.1023 Certifications, disclosures, records maintenance and audits.

(a) *Short-form applications: Certifications and disclosure.* In addition to certifications and disclosures required in part 1, subpart Q, of this chapter, each applicant for a 220 MHz service geographic area license which qualifies as a small business, very small business, consortium of small businesses, or consortium of very small businesses, shall append the following information as an exhibit to its FCC Form 175:

(1) The identity of the applicant's affiliates and controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture; and

(2) The applicant's gross revenues, computed in accordance with § 90.1021.

(b) *Long-form applications: Certifications and disclosure.* In addition to the requirements in § 90.1013, each applicant submitting a long-form application for a 220 MHz service geographic area license and qualifying as a small business or very small business shall, in an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed in accordance with § 90.1021, for each of the following: The applicant, the applicant's affiliates, the applicant's controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture;

(2) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business or very small business under §§ 90.1017 through 90.1023, including the establishment of *de facto* and *de jure* control; such agreements and instruments include, but are not limited to, articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements including letters of intent, oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

(c) *Records maintenance.* All winning bidders qualifying as small businesses or very small businesses shall maintain at their principal place of business an updated file of ownership, revenue, and asset information, including any documents necessary to establish eligibility as a small business or very small business and/or consortium of small businesses (or consortium of very small businesses) under § 90.1021. Licensees (and their successors-in-interest) shall maintain such files for the term of the license. Applicants that do not obtain the license(s) for which they applied shall maintain such files until the grant of such license(s) is final, or one

year from the date of the filing of their short-form application (FCC Form 175), whichever is earlier.

(d) *Audits.* (1) Applicants and licensees claiming eligibility as a small business or very small business or consortium of small businesses (or consortium of very small businesses) under §§ 90.1017 through 90.1023 shall be subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed 220 MHz service, and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(e) *Definitions.* The terms affiliate, small business, very small business, consortium of small businesses (or consortium of very small businesses), and gross revenues used in this section are defined in § 90.1021.

§ 90.1025 Petitions to deny and limitations on settlements.

(a) Procedures regarding petitions to deny long-form applications in the 220 MHz service will be governed by §§ 1.2108(b) through 1.2108(d) of this chapter and § 90.163.

(b) The consideration that an individual or an entity will be permitted to receive for agreeing to withdraw an application or a petition to deny will be limited by the provisions set forth in § 90.162 and § 1.2105(c) of this chapter.

PART 94 [RESERVED]